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A STUDY OF ADMINISTRATIVE ARRANGEMENTS IN DIFFERENT TYPES OF SCHOOL DISTRICTS.
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*SCHOOL ADMINISTRATION, *ADMINISTRATIVE ORGANIZATION,
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QUESTIONNAIRES, COLUMBUS, OHIO,
ORGANIZATIONAL CLIMATE DESCRIPTIVE QUESTIONNAIRE,
OHIO INNOVATIONS SURVEY

THIS INVESTIGATION WAS TO EXPLORE THE POSSIBLE INFLUENCES OF ORGANIZATIONAL CLIMATE AND ITS ELEMENTS (AS DEPICTED BY THE CENTRAL OFFICE ADMINISTRATIVE PERFORMANCE TEAMS IN SELECTED SCHOOL DISTRICTS OF THE STATE OF OHIO) ON THE INNOVATIVENESS OF A SCHOOL DISTRICT. THE "ORGANIZATIONAL CLIMATE DESCRIPTIVE QUESTIONNAIRE," WHICH SERVED AS THE MAIN DATA-GATHERING INSTRUMENT, HAD BEEN DETERMINED IN SEVERAL PREVIOUS STUDIES TO BE A USEFUL INSTRUMENT WHEN WORKING WITH INDIVIDUAL SCHOOL STAFFS. FROM THE SCHOOL DISTRICT SAMPLE OF THE 1964 OHIO INNOVATIONS SURVEY, 13 PREDETERMINED NONINNOVATIVE DISTRICT AND 11 INNOVATIVE DISTRICTS WERE SELECTED FOR DATA COLLECTION. THE MAJOR FINDINGS WERE AS FOLLOWS--(1) INNOVATIVE SCHOOL DISTRICTS EVIDENCED A MORE OPEN CLIMATE THAN NONINNOVATIVE DISTRICTS, (2) INNOVATIVE DISTRICTS WERE FOUND TO BE SIGNIFICANTLY LESS DISENGAGED AND EVIDENCED A HIGHER ESPRIT. NO SIGNIFICANT DIFFERENCES WERE OBTAINED FOR THE ELEMENT OF HINDRANCE, (3) NO SIGNIFICANT DIFFERENCES WERE FOUND WITH RESPECT TO THE GROUP BEHAVIOR ASPECT OF INTIMACY, (4) SUPERINTENDENTS IN INNOVATIVE DISTRICTS WERE PREDICTED TO EVIDENCE SIGNIFICANTLY LOWER ALOOFNESS, LOWER PRODUCTION EMPHASIS, HIGHER TRUST, AND HIGHER CONSIDERATION, ONLY THE COROLLARY INVOLVING HIGHER TRUST HELD, AND (5) FINDINGS ON SUCH OTHER ASPECTS AS RESEARCH EMPHASIS, BIOGRAPHICAL TEACHER CHARACTERISTICS, AND FINANCIAL PROGRAMS WERE ALSO OBTAINED. (JH)

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A STUDY OF ADMINISTRATIVE ARRANGEMENTS IN DIFFERENT TYPES OF SCHOOL DISTRICTS

Cooperative Research Project No. S-272

by

Larry Wayne Hughes, Ph.D.

The Ohio State University

1965

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CHAPTER I

THE PROBLEM

One of the problems facing education today, in these especially fast moving times, is providing more adequately for the field testing of new ideas and the products of basic research. There are two reasons why it is important for schools to involve themselves in field testing. First, it is the best way for testing research, and theory resulting from research, in that the theory is made operational in a natural setting under real conditions. Second, and more important to the problem being introduced, before widespread adoption of a particular practice can be expected, the practice must be observable as working under normal conditions by other educational leaders.

The "gap" of twenty-five to fifty years between the development of a new idea and its general acceptance which Mort, among others, has noted, appears to continue. The number of school districts receptive to innovation seems small indeed when compared to the numbers of ideas issuing from universities, foundations, individuals, and government agencies. Some new ideas do seem to find favor quickly, many times without proper field testing, while others "go begging" and remain largely untried.

For an example of the former, examine the general acceptance and use of television instruction by school districts, despite much conflicting research about its value in many teaching situations. The momentum of the elementary foreign language movement is yet another example.

On the other hand, research in the psychology of learning has not resulted in many material changes in the structure of the high school curriculum. Likewise, knowledge about child growth and development has made few inroads on the traditional lock-step process of formal education in American schools. And, even with the change that has taken place, few would suggest that a general receptivity to change exists on the part of most school systems. A more thorough examination of this will take place in Chapter II.

The general phenomenon of change has been a source for much study over the years. Research and literature in the social sciences has been sufficient to indicate the importance of the "change agent" or "innovator" in fostering change. These writings indicate that individuals classified as innovators tend to exhibit certain characteristics, act in certain similar ways, and are reacted to in certain ways by other society members.[1]

Generally, the unit of initial adoption of a new idea or practice is an individual, or a small group of individuals. In education studies the unit of adoption usually has been a school system. The focus in the latter instance is on the organization rather than an individual.

A problem exists in the fostering of educational change. It is suggested that the paucity of districts actively involved in putting the products of basic research to the field test and critically examining the results for other districts to see is a factor in the relative slowness with which school systems adopt innovative practices. It is further assumed that it is indeed a function of the public schools to experiment and field test, and that if this function is not performed, the same slow rate of adoption and change will continue--to the detriment of our nation's education system.

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[1] Everett Rogers, "Characteristics of Innovators and Other Adopter Categories," Research Bulletin 882, Wooster, Ohio: Ohio Agricultural Experiment Station, 1961; C. Paul Marsh and Lee A. Coleman, "Farm Practice-Adoption Rates in Relation to Adoption Rates of 'Leaders,'" Rural Sociology, XIX (1954), 180-81; Jess and Jean Ogden, Small Communities in Action (New York: Harper Brothers, 1946), p. 227; Lowry Nelson, Charles E. Ramsey, and Coolie Verner, Community Structure and Change (New York: Macmillan Co., 1960), pp. 188-89.

A study by Brickell has concentrated on the problem of dissemination of educational change.[2] He points out that a telling reason for the "lag" is the lack of a system to provide for more innovative or "beacon-light" districts, who are encouraged to put the products of research into practice for other schools to examine and eventually accept. His procedures for providing this may or may not prove effective. This writer is not at present concerned with whether or not they are, but the point is that individual school systems can be seen as the keys to wider and quicker dissemination of ideas and practices.

Despite a lack of general encouragement by accrediting agencies or state departments of education,[3] and despite general acceptance by most school districts of only slow evolutionary change, some schools do innovate and accept new ideas readily. Some public schools are found to be on the "growing edge." What is different about these systems that make them more sensitive to new ideas or to "giving things a try"? There have been several studies which reveal certain characteristics or traits that seem to be more typical of innovative school systems and/or communities in which these school systems are located.

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[2] Henry M. Brickell, Organizing New York State for Change (Albany: State Education Department, 1961).

[3] Charles E. Teckman, "The Influence of State Departments and Regional Accrediting Agencies on Secondary School Experimentation" (Ph.D. dissertation, The Ohio State University, 1962).

Kumpf's research,[4] for example, indicates that certain kinds of communities seem to enhance innovation and change. He found such variables as high white collar population, high owner-occupied dwellings, and high percentage of individuals fifty years of age and over to be significant. Too, he noted that the community tends to have a high per capita wealth, and a high per pupil expenditure among other important factors, as well as a generally high understanding of "what schools can do." Ross[5] also notes a high relationship between the financial resources of a school system and its tendency to innovate. Rogers has reported[6] that "In fact outstanding innovative school systems are usually located in particularly wealthycommunities."

Beginning in the 30's Mort and his students have devoted much research to the incidence of innovation in school districts. By and large these studies have concluded, as Ross has summarized: "If but one question can be asked on the basis of the response to which a prediction of [adoption of innovations] is to be made, the question is, how much is spent per pupil?"[7]

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[4] Carl H. Kumpf, "The Challenge of Studies of Adaptability to an Elementary School in a Large City" (Ph.D. dissertation, Teachers College, Columbia University, 1949), pp. 13-15.

[5] Donald H. Ross (ed.), Administration for Adaptability (New York: Metropolitan School Study Council, 1958), p. 119.

[6] Everett Rogers, "What Are Innovators Like," Theory into Practice, II (December, 1963), 269-277.

Yet, not all rich school innovate. Neither are all less than rich schools change-resistant. And, while community attitude about providing support for the costs of the school may be an important variable, the issue as to whether or not a school is innovative appears to involve more than community attitude or even community wealth. The school system itself, it would seem, has some control over whether or not it will innovate.

In a very recent research study by Carlson this position is strengthened. Carlson studied the diffusion rate of innovations in two counties located in West Virginia and Pennsylvania. One of the counties in the study expended considerably more per child than did the other. In examining the amount of acceptance of various innovations in the two geographic areas and in examining the relation between the number of new practices accepted and pupil expenditure levels within the two areas, Carlson did not find expenditure levels to be a powerful predictor of the amount of acceptance. Carlson found, too, the pattern of adoption in both counties to be related to superintendent's position in the social structure composed of himself and his administrative peers in the county.[8]

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[7] Ross, op. cit., p. 15.

Carlson has suggested that Mort and the research studies generated from Mort's work were narrowly conceived, He develops the idea that innovation and diffusion in education can be examined from three aspects, viz.:

1. The characteristics of the adopting unit (individual and/or group)
2. The way the adopting unit is joined to communication channels and sources of information
3. The position the adopting unit holds in the social structure of like units.[9]

This position is substantiated by research in communication, as well as in innovations research in the fields of rural sociology and medicine.[10] Carlson points out that the cost-quality studies of Mort and others concentrate only on the characteristics of the adopting unit and largely omit any consideration of the other two factors, both of which have their basis in innovations research in fields other than education. It would seem, then, that factors other than wealth also influence innovation and diffusion in the school setting.

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[8] Richard O. Carlson, paper presented March 30, 1965 at the University of Oregon conference "New Directions in Research in Educational Administration."

[9] Ibid., p. I:4.

[10] Elihu Katz, "The Two-Step Flow of Communication: An Up-to-date Report on an Hypothesis," Public Opinion Quarterly, 21:61, Spring, 1957; J. W. Riley, Jr., and M. W. Riley, "Mass Communication and the Social System," Sociology Today, R. K. Merton et al., eds. (New York: Basic Books, Inc., 1959); The reader is also directed to Chapter II of this dissertation for a more complete reporting of research relative to innovation and diffusion.

Other recent research suggests that innovation within the school setting is enhanced or inhibited by the attitudes and behaviors of those in leadership positions.[11] The principalship has been the subject of studies which have suggested this latter point. It would seem, however, that while the principal is certainly in an important position insofar as instructional and curricular innovation is concerned, his influence on innovation would seem to be dependent upon the attitude of his superiors in the administrative hierarchy toward change. Central office staff might be a more logical beginning point in the search for differences between innovative and non-innovative school districts.

In summary then, it is not yet known what makes one school tend toward innovativeness and another not. If it is important that more schools become willing to do field research and to try out new ideas, if it is desirable to foster change, and if the proper mechanisms for providing for change have not yet been discovered, it is important that the existing research in the area of educational change and innovation be extended and expanded.

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[11] Mark Chesler, Richard Schmuck, and Ronald Lippett, "The Principal's Role in Facilitating Innovation," Theory Into Practice, II (December, 1963), 269-277; Lee H. Demeter, "Accelerating the Local Use of Improved Educational Practices in School Systems" (Ph.D. dissertation, Teachers College, Columbia University), 1951.

The Research Study

One aspect of whether or not a school district is amenable to change, or whether individual schools within a school district are permitted to experiment and do field research would seem to be the "organizational climate" which exists in the central administrative offices of that district. Organizational Climate may be generally defined as the organizational "personality." Figuratively, personality is to the individual what climate is to the organization.[12]

This research is designed to examine and describe central office administrative and supervisory personnel's perceptions of themselves as a group and of the superintendent as a leader in highly innovative and in non-innovative school districts in Ohio. The descriptions result in what can be called the "organizational climate," or the "personality" of the organization.

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[12] Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (Chicago: Midwest Administration Center, University of Chicago, 1963), p. 1.

Of key importance would seem to be the examination and analyses of the elements making up the climate. It would appear that through this effort much knowledge and understanding could be gained relative to important components in the creation of a readiness for change, or if the reader will, a "climate for innovativeness." Certainly knowledge and understanding of the behaviors and characteristics of administrative performance teams is requisite to studies affecting those behaviors. One could hardly be expected to change productively, or improve the climate for innovativeness, or the behaviors which create this climate, unless he knew something of the behavior he was attempting to change, or of the direction in which he was attempting to move. This study could provide much data of considerable value in the aforementioned task.

It would seem that the climate which exists in the central offices of a district would, in great part, determine the district-wide climate. If the climate was one which permitted or encouraged leadership acts arising out of the group as a whole, and if it provided appropriate emphasis upon task accomplishments as well as individual social needs of group members, thereby providing for the institutional goals and individual goals, there would follow a situation in which change might well be encouraged. It would appear that the result of such a climate would be the threat-free, idea-generating, and idea receptive environment so essential to change or readiness for change. This would seem to be what could be called an open climate and would appear to be the kind of environment in which the change agent or change agents would most likely meet with success.

Halpin and Croft have developed the Organizational Climate Descriptive Questionnaire which has proved useful in describing the personality of schools.[13] This questionnaire, which will be discussed at some length later in this chapter, provides a way of examining an organization through individual staff members' views of the "way things are." There are eight sub-tests comprising the instrument; four each which make up the dimensions, Group Characteristics and Leader Behavior. These sub-tests are referred to as "elements" of the climate. The behavior dimension tapped by each sub-test is described as follows:

Group Behavior:

1. Disengagement. This refers to the group members' tendency to "not be with it." The dimension describes a group which is "going through the motions," a group that is not "in gear" with respect to the task at hand. In short, this sub-test focusses upon a member's behavior in a task-oriented situation.
2. Hindrance. The reference here is to the group's feeling that the superintendent burdens them with routine duties, committee demands, and other requirements which might be construed as busy work. The perception is that the ascribed leader is hindering rather than facilitating their work.

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[13] Ibid.

3. Esprit. This refers to "morale." Members feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy. This refers to the members' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Superintendent's Behavior:

5. Aloofness. This refers to behavior by the superintendent which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with group members in an informal, face to face situation. His behavior, in brief, is universalistic, rather than particularistic; nomothetic, rather than idiosyncratic. To maintain this style, he keeps to himself, at least "emotionally" at a distance from his staff.

6. Production Emphasis. The reference here is to behavior which is characterized by close supervision of the staff. He is highly directive and plays the role of the "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust. This refers to behavior by the superintendent which is characterized by his evident effort in trying to "move the organization." Trust behavior is marked not by close supervision, but by the superintendent's attempt to motivate the staff through the example which he personally sets. Apparently, because he does not ask staff to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the staff.

8. Consideration. This refers to behavior which is characterized by an inclination to treat

> staff "humanly"; to try to do a little something extra for them in human terms.[14]

From the scores on these eight sub-tests a profile can be constructed, for each district, which depicts the organizational climate. By comparing the profiles of districts, the distinguishing features of their respective organizational climates can be identified. Halpin and Croft, in their research, were able to devise an organizational climate continuum with six gradations leading from "Open" to "Closed." They delineated these six "profiles" as "Open," "Autonomous," "Controlled," "Familiar," "Paternal," and "Closed."[15]

This research is an exploratory study of central office administrative staffs* in selected highly innovative and non-innovative school districts in the State of Ohio. (Hereafter, the central office professional staff will be referred to as the administrative performance team or APT.) The research writer will describe the organizational climate in innovative and non-innovative school districts. In this description the behavior of two kinds of team members will be described, viz., superintendent, and subordinate performance team members.

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[14] Ibid., pp. 29-32. (The phrasing in the definitions has been modified by the writer, but not substantially changed, to fit the particular group with which he is working.)

[15] Ibid., p. 60.

*For the purposes of this study all professional staff members, including supervisors, etc., of the central office will be considered "administrative staff" and thus members of the administrative performance team.

Problem for investigation

The hypotheses to be tested in the course of this study are as follows:

1. Highly innovative school district administrative performance teams will evidence a climate which can be described as more "open" than will non-innovative school district administrative performance teams.

2. Significant differences between highly innovative and non-innovative school districts will be shown to exist in elements of organizational climate associated with the group behavior characteristics.

Corollary 1. Highly innovative districts will be significantly less "disengaged" than will non-non-innovative districts.

Corollary 2. Highly innovative districts will reflect a significantly lower "hindrance" than will non-innovative districts.

Corollary 3. Highly innovative districts will exhibit a significantly higher "esprit" than will non-innovative districts.

3. No significant differences will be shown to exist between highly innovative and non-innovative districts in the "intimacy" element of group behavior characteristics.

4. Significant differences between highly innovative and non-innovative school districts will be shown to exist in the elements of organizational climate associated with superintendent's behavior characteristics.

> Corollary 1. In highly innovative districts, superintendent's behavior will reflect a significantly lower "aloofness" than will superintendent's behavior in non-innovative districts.
>
> Corollary 2. In highly innovative districts, superintendent's behavior will reflect a significantly lower "production emphasis" than will superintendent's behavior in non-innovative districts.
>
> Corollary 3. In highly innovative districts, superintendent's behavior will reflect a significantly higher "thrust" than will superintendent's behavior in non-innovative districts.
>
> Corollary 4. In highly innovative districts, superintendent's behavior will reflect a significantly higher "consideration" than will superintendent's behavior in non-innovative districts.

The Study Design

Instrumentation

For the purpose of describing the Organizational Climate of central offices in innovative and non-innovative school districts, the writer has modified and adapted the

Organizational Climate Descriptive Questionnaire (OCDQ) developed by Halpin and Croft.[16]

This instrument, developed and validated initially for the use in determining Organizational Climate in elementary schools, appears, upon intensive examination, to lend itself readily to modification for use in describing climates as evidenced in central offices. The guiding principles and assumptions underlying the instrument can be seen to be such as to make it an effective means of examining administrative performance teams. The authors state:

> In gathering material for the OCDQ items, one point struck us forcibly: that an essential determinant of a school's effectiveness as an organization is the principal's ability--or his lack of ability--to create a "climate" in which he, and other group members, can initiate and consumate acts of leadership. One of our guiding assumptions is that a "desirable" Organizational Climate is one in which it is possible for leadership acts to emerge easily. If an organization is to accomplish its tasks, leadership acts must be initiated. Such acts can be initiated either by the designated leader or by members of the faculty. In this view we have been supported by the central finding that pervades all research on leadership and group behavior: an "effective" group must provide satisfaction to group members by giving a sense of task-accomplishment, and by providing members with the social satisfaction that comes from being a part of a group.[17]

A word may be appropriate here relative to the legitimacy of adapting this instrument to the central office when it was originally constructed for use in elementary schools.

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[16] _Ibid._

[17] _Ibid._, p. 7.

The original OCDQ has been carefully validated[18] by Halpin and Croft using several methods and involving a study of seventy-one schools. Since this time it has been subjected to further validation in an even more extensive study by Brown.[19]

The only changes the current researcher has made in the instrument have involved substituting the word "superintendent" for "principal" and "central office staff member" for "teacher," and that of dropping nine items which had to do solely with teaching, and thus were not applicable to a central office situation. No other items have been substituted for these nine.

The possible difference in group size, in the opinion of recognized researchers with whom the problem was discussed,[20] would not injure the validity of the instrument. Since individual group members' perceptions of an existing situation is being described, the change in location of the situation would not seem to affect validity.

Also, the original instrument has been subjected to use in differing situations and settings and has proved to be discriminating. Andrews, Sargent, Thomas, and Muliak, for example, have all made use of the Organizational Climate Descriptive Questionnaire in their widely varying research studies.[21] Zinn is presently conducting a study involving the central office professional staff of several Ohio school districts in which he is applying as one of the instruments of measure the OCDQ.[22] From his research, as well as the current researcher's study, may come even greater evidence of the usefulness of the OCDQ.

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[18] Ibid., Chapters 2 and 3.

[19] Robert J. Brown, "Identifying and Classifying Organizational Climates in Twin Cities Area Elementary Schools" (Ph.D. dissertation, the University of Minnesota, 1964).

[20] Dr. David M. Clark, Associate Dean, College of Education, The Ohio State University, Dr. Jack Frymier, Professor of Education, The Ohio State University, June and July, 1964.

If, indeed, an instrument does differentiate, it is useful and has inherent validity. It can be logically argued that this instrument will differentiate; it has already done so in group-leader situations. The only major difference in its application in this study from the original study is in the locus of the group-leader situation.

---

[21] John Andrews, Faculty of Education, University of Alberta, has conducted an extensive study (over 180 schools in the sample) to test OCDQ in elementary and secondary schools looking for relationships between climate and teacher satisfaction and between climate and "effectiveness" of the school. James Sargant, University of Minnesota, is completing a study about the relationships between organizational climate and personal variables of principals in secondary schools. Michael Thomas, College of Education, University of Texas, has completed a study of the relationships between sub-groupings of senior high school staffs and their perceptions of climate dimensions which has involved eight senior high schools with a staff size ranging from 19 to 33 teachers. Stanley Muliak, Psychology Department, University of Utah, has employed the OCDQ in a hospital setting (nurses and supervisors). All of these research workers have used the OCDQ in a setting which differs from that in which it was validated.

[22] Lawrence A. Zinn, "Role Dimensions of the Administrative Assistant to the Superintendent Related to the Organizational Climate of the Central Office in Selected Ohio School Districts" (Ph.D. dissertation in progress, The Ohio State University).

There are 64 OCDQ (Form IV) items. Nine of these have been deemed by the writer to be unsuitable for use in applying the instrument to administrative performance teams. (The dropped items were so stated that they could not be adapted from the elementary school setting to a central office setting without risk of doing violence to the intent of the item. The reader is referred to the Appendixes where both the original and the adapted questionnaire can be examined.) The remaining fifty-five items are assigned to the same eight sub-tests developed by Halpin and Croft. As previously noted, four of these sub-tests pertain primarily to characteristics of the group as a group; the other four to characteristics of the ascribed leader of the group.

The eight sub-tests are identified as follows:

Group Characteristics:
1. Disengagement
2. Hindrance
3. Esprit
4. Intimacy

Leader Behavior
5. Aloofness
6. Production Emphasis
7. Thrust
8. Consideration[23]

Because of the exploratory nature of the research, the researcher will not attempt to classify the districts except as "tending to the open end of the continuum" or as "tending to the closed end of the continuum." The researcher uses, for comparison, the profiles developed by Halpin and Croft for "Open" climates and "Closed" climates.

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[23] Halpin and Croft, op. cit., p. 2.

To introduce some element of precision in the assessment of climate the researcher has developed a mathematical operation to be performed as the profiles are compared. This procedure is described in detail in Chapter III. Even with this, however, the assessment is a gross one and, at most, will indicate a tendency.

The terms "Open" and "Closed" as used in the Halpin and Croft work, and as they are used in this research, result in part from Rokeach's study in The Open and Closed Mind.[24] Even as one can regard minds as open or closed, so are organizational climates viewed as open or closed. Openness would be distinguished by a functional flexibility; closedness by a functional rigidity.[25]

The open climate can be further distinguished as follows. It depicts a situation in which members enjoy extremely high Esprit and low Disengagement. The superintendent's policies facilitate staff accomplishment of their tasks and this is reflected in a low Hindrance. While friendly relations are enjoyed, there is not an extremely high degree of Intimacy.

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[24] Milton Rokeach, The Open and Closed Mind (New York: Basic Books,Inc., 1960).

[25] Halpin and Croft, loc. cit.

The behavior of the superintendent in the open climate represents an integration between his own personality and the role he is required to play as leader. In this respect Halpin and Croft view his behavior as "genuine." Evidenced is a high Thrust and an equally high Consideration. There is a low Aloofness score and Production Emphasis is also low. A situation seems to exist, then, wherein the ascribed leader does not have to monitor staff activities closely because staff is indeed producting easily and freely. Nor does he have to do all the work; he has the ability, to the extent that this can be inferred from the scores, to let appropriate leadership acts emerge from others. Withal, it could be said, he is in "full control of the situation" and clearly provides leadership for the staff.

The closed climate can be distinguished by the following characteristics. Staff members are highly Disengaged. The superintendent does not facilitate task accomplishment so there will be found a high Hindrance score. Esprit will be low. Halpin and Croft did find, however, that schools which fell in the closed category evidenced an "average" Intimacy. (Apparently even in closed climates, staff enjoy friendly social relations with each other.)

The ascribed leader's behavior in the closed climate evidences high Aloofness and high Production Emphasis but will show little Thrust. He shows, also, little concern with the social needs of his staff, this being depicted by a low Consideration score.

Thus the writer has had defined the extremes against which to measure innovative and non-innovative schools. The question may be raised as these definitions of open and closed climates are reviewed, "How high is high?" "How low is low?" To this the researcher can only answer by calling attention to the fact that there are no norms against which to measure highness or lowness but that he is hypothesizing that the highly innovative school districts will significantly differ from non-innovative districts in all but one of the dimensions that describe "Openness" or "Closedness." Further, it is pointed out that the study is an exploratory one; the researcher is attempting to discover what differences exist, if any, in climates as defined and described by the OCDQ. He is advancing the thought that these differences may be labeled as indicators of openness or closedness. The OCDQ as adapted is too gross a measure to determine how much openness or closedness there is; it will merely describe an existing phenomenon and perhaps indicate a tendency. Too, as previously noted, the researcher uses as a basis for comparison the prototype profiles of "Open Climate" and "Closed

Climate" which issued from Halpin and Croft's research. These profiles do reflect a score against which the districts in the current research can be measured.

There are, then, two aspects to the analysis in this research, based as it is on the relationship between the organizational climate of a district's central office and the relative degree of innovativeness or non-innovativeness of that district. In the analysis of the data of this study a distinction is made between the global concept of organizational climate as reflected in the first hypothesis and the elements (sub-tests) of the climate considered separately. Climates are designated in the study by the profile patterns described by the eight sub-tests of the OCDQ. But it was felt that important relationships would be overlooked if sub-test scores were not analyzed separately, as well. Thus, the researcher will refer to the "global concept" of organizational climates (the profiles described by the eight subtests) and to the "elements" of organizational climate as the sub-tests are considered separately.

Reliability study

The OCDQ has been subjected to accepted tests of reliability by the authors, as well as by subsequent users of the instrument and has been found to be a reliable instrument. The current researcher, however, was interested in determining the degree to which central office APT members perceived "what is" similarly. The OCDQ is being applied to a somewhat different group than the teaching staff of a single school. Its usefulness as a single instrument with the central office staff in individual school districts may be indicated by a study which would indicate the congruence of perception of APT members.

Since the researcher is more centrally concerned with the dependability of the group's perception of the "organizational climate," a method of checking reliability was used which involved computing the correlation, sub-test by sub-test, between the description given by the odd-numbered administrative performance team members and that given by the even-numbered. This method is described more fully in Chapter III.

Study Sample

This study will be limited to the State of Ohio since it is within this universe that the writer has available data for the selection of the sample. Since the study is exploratory and since the plan required the personal administration of an instrument to administrative performance teams of each district to be included, the number of districts to be studied is small. Too, the writer is interested in looking only at the "extremes" of innovativeness at this point.

After a review of preliminary Ohio Innovations Study data it was decided to select the top twenty districts in terms of numbers of innovative practices and those twenty districts with no or the fewest numbers of innovative practices as the sample. These would provide the extremes for the research. Chapter III explains in detail the selection of these districts.

The Ohio Innovations Study

The Bureau of Educational Research and Service of The Ohio State University, with the co-operation of the Ohio State Department of Education, Ohio Education Association, Ohio Association of School Administrators, and Ohio School Boards Association, began, in the 1963-64 school year, to collect data relative to the amount and kind of innovation on-going in Ohio's public schools. Ultimately, over 300 school districts in the State participated in the study. This study, carried on under the direction of Daniel Stufflebeam of the Bureau staff is entitled the "Ohio Educational Innovations Survey." Serving under Dr. Stufflebeam's direction in this survey was a staff member from each of the co-operating organizations in addition to three doctoral students in educational administration.

The purpose of the initial data gathering was the development of a "catalog" of innovative practices similar to the Brickell catalog for New York State.[26] The method used in the development of the Ohio "catalog" proceeded through four steps.

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[26] Brickell, op. cit.

Initially, a letter from Dr. Stufflebeam was sent to all of the public school districts in Ohio. In this letter the purpose of the study was briefly outlined and districts were requested to complete brief questionnaire forms for each of seven areas under investigation. The seven areas investigated for their possible innovative practices included Administrative Organization, Business, and Finance; Staff Personnel; Instruction; Pupil Personnel; School-Community Relations; Plant; and Research.

Step two involved screening the responses received. For this task the eight members of the survey team ranked each of the practices as: (1) Innovative, (2) Maybe Innovative, (3) New National Program (i.e., SMSG, PSSC, etc.), (4) Not Innovative but Worthy of Follow-up, (5) Not Enough Information, (6) Not Innovative. For this initial ranking no criteria of what was innovative were developed. Rather, members, operating from their own frame of reference and experience, independent of each other, and without prior knowledge of the rank others were placing upon the various practices, judged the practices. Second questionnaires were sent when more than half the members agreed that a practice was either 1, 2, or 3. Too, when the majority agreed that a particular practice was 4 or 5, or better, second questionnaires were sent so that a more firm assessment could be made. Practices which received a majority rating of 6 were discarded from further consideration. It is interesting to note, and important to the writer's proposed research, that there were few instances of ranking where there was not overwhelming independent agreement. In other works, in a vast majority of the cases true consensus, rather than simple "majority rules" was the case.

Step three involved sending out second questionnaires requesting more detailed and specific information. Second questionnaires varied slightly in wording depending upon the kind of possible innovative practice being followed up. (Staff Personnel, Instruction, etc.)

Step four began as the second questionnaires were returned. This step was the final evaluation, or screening, of the practices. For this important procedure, criteria were developed. The following were to be considered in the selection of programs or practices as being worthy of inclusion in a catalogue of innovation:

1. Uniqueness: May be unique in either or both of two ways, i.e., conceptualization and implementation. We are not interested in unique concepts poorly carried out, but want to include programs such as national curricula, which, although not unique in concept, are well implemented.

2. Clarity of Objectives: The school must have implemented the program with a definite goal or goals.

3. Care in Planning: A maximum of rational preparation for a new program is deemed desirable. This may involve a wide range of activities from, for example, public relations to special training for staff members, or even construction of special facilities.

4. Relevance: A program dealing with a critical problem area is to be given advantage over one of questionable relevance to current educational problems.

5. Applicability: A program should apply either directly or in modified form to many schools. This is perhaps the least stringent of the criteria since there is great value in programs which apply to large schools but not to small ones; rural, but not to urban; primary, but not secondary, etc. However, programs with no possibility of extension to another school should not be selected.

6. Provision for Evaluation: There must be provision for some formal means, developed by the school or the district, by which the new practice is to be evaluated.

Survey team members were to mark the practices and programs "Visit," "Describe," "List," or "Don't List." This system of marking was for the purpose of catalog development only. The format of the catalog is such that certain innovations were to be observed in practice and written up at length, certain others to be described in detail, and the rest simply listed by geographic area. All of the practices marked "Visit" or "Describe" were considered innovative. Those marked "Do Not List" were considered non-innovative and removed from any further consideration. The "List" designation was treated as partially innovative and the attention the current researcher gave these practices in his research is fully described in Chapter III.

Early Sample Selection

The current researcher had available then a population of school districts with innovative practices. The selection of the most innovative, or "highly innovative" was a matter of finding those districts which the data indicated as having the highest number of innovative practices or programs. He recognizes that this is a gross measure, but would point out that at this stage of the research in the area to be explored, it seemed to be the most reasonable of measures. It is, in a very real sense, a quantitative measure, but quality of innovation was certainly a factor in the second screening as examination of the criteria used in that screening will show. Thus it can be assumed that if a practice survived the second screening, it has passed a test of quality.

The selection of "highly innovative" districts on the basis of sheer number then seemed to have some logical merit. This is not to say that some innovative practices are not "more important" than others, or have more impact, or represent more real innovativeness, but these designations are at this time in the realm of value judgment and relatively incapable of objectivity. The writer is using the best measure that seems to be available. It should be noted that a practice did not have to be district-wide to be included, but that the same innovation on-going in more than one place in the district was considered as simply one innovation.

Non-innovative school districts were selected from districts which did participate in the Ohio Innovations Study survey but which were revealed to have few or no practices which could be labeled "Visit," "Describe," or "List." A more detailed statement of the actual selection of districts in the sample is included in Chapter III.

Method of Obtaining Data

After the "highly innovative" districts were discovered by use of the Ohio Innovations Study data, the writer developed a list of non-innovative schools from this same data source.

Following the selection of the sample groups the writer made arrangements for personally administering the OCDQ (Form IV) as modified. From this instrument came the bulk of the data to be used in the research. The instrument was administered, to APT members in a particular district collectively, at one sitting.

Treatment of the Data

The writer has constructed "profiles" for each district studied, as well as composite profiles for highly innovative districts, and for non-innovative school districts. Tendencies toward openness or closedness can be discerned in a study of the profile patterns described by the eight sub-tests of the OCDQ. This analysis may be designated as global.

It was felt, however, that important relationships might be overlooked if sub-test scores were not analyzed separately. Too, the writer has hypothesized that there will be significant differences between innovative and non-innovative districts on seven of the eight sub-tests. Thus, innovative districts were compared with non-innovative in each of the elements tested by the sub-tests.

The statistical treatment involved the use of mean scores for each district on the sub-tests. Converted to standard scores, mean scores for innovative districts as a group and non-innovative districts as a group were also to be computed. Standard mean scores were computed and comparison of the profiles was made with the prototype profiles of Halpin and Croft. The writer used a t-test for testing the differences between the means. Since the sample in this research was small, this technique was preferred over other tests which involve the use of normal probability tables.[27] Significance was tested at the 1 per cent level of confidence and the 5 per cent level, and since this is exploratory research at the 10 per cent level as well.

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[27] Walter R. Borg, Educational Research, An Introduction (New York: David McKay, 1963), Chapter 6; Bert Price, Statistician, Mathematical Computation Laboratory Ohio State University, in consultation with the researcher, October, 1964.

As discussed earlier the reliability coefficient is obtained by computing the correlation, sub-test by sub-test, between the description given on the OCDQ by the odd-numbered APT members in a district and that given by the even-numbered. This is one of the tests of reliability employed by Halpin and Croft. This information is presented in a table in Chapter III. A more thorough explanation of the methods employed in treating the data can be found in Chapter III.

Other Aspects of the Study

In addition to the preceding statements of the essence of the study, the writer was in the position of being able to examine several aspects that may be of an impinging nature on innovation in the school setting, or which may reveal worthy issues for further research.

The researcher collected additional data relative to each district in such areas as (1) The average daily membership of pupils (ADM), (2) The valuation per pupil, (3) The expenditure per pupil, (4) The total expenditure per pupil that went for instructional costs, and (5) The school tax rate. These data were secured for the 1963-64 school year. These data are treated statistically to reveal any significant differences.

The final aspect examined involved comparing certain of the biographic data obtained in the administration of the OCDQ.

Summary

This research is concerned with the possible effects the central office organizational climate and the elements thereof may have upon the adaptability or "innovativeness" of a school district. It examines organizational climate in eleven "highly innovative" school districts and thirteen "non-innovative" school districts. Research has shown certain factors such as wealth, size, community attitude, and population characteristics to be related to the readiness of a district to change. The current researcher suggests that still another factor exists and that this factor is the organizational climate that resides in the central office of the district.

This research is not designed to show that central office organizational climate, or any of the elements thereof, is the prime cause of innovativeness or lack of it. Indeed, the central office has not been shown, up to this time, to be even a contributing cause. The leap is too great, the developed measures too gross, to move to this in this exploratory research. The research has been designed to examine the organizational climate and the elements of that climate to see if it can be suggested as one of several impinging factors. This exploratory research is too gross to prove cause and effect; this will need to be done by future researchers. By exploring climate in innovative and non-innovative school districts the current researcher has established the necessary groundwork upon which other research workers may develop more sophisticated research tools and more sophisticated research to prove or disprove its relative importance and to extend the knowledge about innovation in the school setting.

The remainder of the dissertation is organized as follows:

Chapter II will contain a review of pertinent literature and research. This review will have three aspects. It will contain a general discussion of the phenomenon of innovation and change agents; a discussion of the psychological concepts of openness and closedness; and conclude with an examination of pertinent findings in the field of administrative organization and leadership.

Chapter III contains a discussion of the methodology and design of the research.

Chapter IV presents and analyzes the data obtained.

Chapter V contains a summary of the writer's findings from the data, his conclusions, and the implications of the study.

CHAPTER II

A REVIEW OF PERTINENT LITERATURE AND RESEARCH

This chapter will be organized into three distinct yet interrelated sections. Initiating the discussion will be a general treatment of the phenomenon of innovation in which there will be examined aspects of the innovative process as explored by research writers from several fields. The purpose here is to discuss general concepts and build a frame of reference from which reader and writer can move with some common understandings.

The second section will briefly discuss the psychological concepts of openness and closedness as they might relate generally to the innovative process and specifically to the dissertation problem at hand. To use Lewin's concept, openness can be described as functional flexibility; closedness as functional rigidity.[28]

In the final section of the chapter, the emphasis is upon the educational organization, leadership behavior within that organization, and the guiding theory of administration under which the research is pursued.

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[28] Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw-Hill, 1935), pp. 194-238.

Innovation and the School Setting

Of some concern today especially is the responsiveness of public education to needed change. Few would suggest that major changes have not occurred in the past fifty years but questions are often raised about the rate and direction of these changes.

Yesterday's student of education would undoubtedly evidence amazement at the transition from the one-room frame school to today's modern buildings equipped with central libraries, cafeterias, language laboratories, and all the other vestments of an educational plant of the 1960's. Too, the arrangement of courses, the emphasis now on the sciences over the humanities, and the general enlargement of the curriculum, might also cause wonderment. The electronic gadgetry of today's schools would serve to add to the confusion.

But as yesterday's scholar was provided with some time to assimilate these apparent changes, he would probably become quite comfortable. Despite the changes in facade and facility, in techniques and technology, few of the changes were beyond the realm of possibility in the early 1900's. The change that has characterized the schools is a slow evolutionary change, and largely "random change," if this term can be used as the opposite of the social-psychological concept of "planned change."

Too often this change by evolution, or by "fit and start," has been looked upon as the only way possible. Yet it has left schools inadequate not only to meet the challenges of the future but also the challenges of the present. Miles[29] points out ". . . education is supposed to be the main socializing agent and developmental support for an industrial society undergoing exponential change." Yet in Brickell's study[30] it was found that the average school in New York State, while "tripling" its innovation rate in curricular practices following the launching of the first Soviet satellite, was able to achieve this great increase by successfully installing only one such innovation per year!

It has become increasingly apparent over the last fifteen years that schools are not making the required rapid adjustments to a very rapid societal change. The schools have relatively recently come under attack on all sides and schoolmen are forced to deal daily with powerful and determined advocates of change in the social, economic, technological, political, and religious realms. It is as if all at once our schools in many ways are not good enough and it would appear that evolutionary change is even less adequate than before.

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[29] Matthew B. Miles, "Education and Innovation: The Organization as Context," a paper read at Career Development Seminar, University Council for Educational Administration held at the Auburn University, Auburn, Alabama, October 25-28, 1964.

[30] Brickell, op. cit., pp. 493-532

Planned change as a concept

What is being called for is "planned change"; change which is ordered and in response to the demands of the time. Unfortunately, planned change as a concept has not been utilized in effecting educational change. It has been suggested by some that educators' misunderstanding of the term itself has been a major deterrent to its use. Some educators seem to respond to the term as if it were some type of thought control. In other social process fields, notably agriculture, the concept has been accepted in its sociological context and employed with great effectiveness.

Yet, the presumption that there are agents and forces which might be utilized to facilitate the change process in education has proved valid. Witness the success of the Course Content Improvement Projects of the National Science Foundation. Four years after the introduction of the Physical Science Study Commission materials, the PSSC staff reported that these materials were in use in one-third of the secondary school physics classes. Similar results are reported for the "new mathematics." This process of diffusion has not been evolutionary. Indeed, it has been revolutionary. The mechanism by which the change was effected is well known. The group moved to eliminate all possible roadblocks before the introduction. Certain forces were presumed to influence the pace of change in the school setting. The dollar barrier was removed; new texts were developed; teachers were paid to attend institutes; supplementary readings, new laboratory equipment, and audio-visual aids were developed; and a partnership of university scholars, secondary teachers, and lay advisers was utilized to develop tests and disseminate the change.

It is true that one successful curricular project does not illustrate all there is to know about educational change. However, the National Science Foundation does demonstrate that in education as in other areas, one does not have to wait for evolution--controlled and planned change is possible. Planned change is possible; that is, once identification is made of the factors which operate to facilitate change, and once those factors which inhibit change are identified and removed.

The Phenomenon of Innovation

Research in innovation and diffusion may be observed in the research tradition of such disciplines as anthropology, rural sociology and agriculture, medicine, industry, and education. The importance of such research in these fields goes well beyond the simple discovery and description of elements of a process.

Research on the subject of innovation and diffusion in the field of rural sociology is the most extensive. This research, expressed in the work of the Cooperative Extension Service of the United States Department of Agriculture as well as in many state departments of agriculture, has resulted in great changes in agricultural practices over the past four decades. Rogers[31] has reported over 200 such research studies in diffusion by rural sociologists.

From this body of research, the Rural Sociological Society has been able to classify the diffusion research findings[32] under four broad headings:

1. The differential acceptance of farm practices as a function of status, role, and motivation.
2. The differential acceptance of farm practices as a function of socio-cultural systems.
3. Diffusion as the study of cultural change.
4. Diffusion as a problem of the communication of information.

Lionberger[33] in a more detailed categorization of diffusion research in agriculture, has identified eight areas for use in classification of research on the adoption of new agriculture practices. They are:

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[31] Everett M. Rogers, Diffusion of Innovations (Glencoe, Illinois: The Free Press, 1962).

[32] North Central Regional Sociology Committee, Sociological Research on the Diffusion and Adoption of Farm Practices (Lexington: Kentucky Agriculture Experiment Station, June, 1952).

[33] Herbert F. Lionberger, "The Diffusion Research Tradition in Rural Sociology and Its Relation to Implemental Change in Public School Systems." Paper presented at the Symposium on Identifying Techniques and Principles for Gaining Acceptance of Research Results of Use of Mass Media in Education, Lincoln, Nebraska, November 24-27, 1963.

1. Personal characteristics of the acceptor.
2. Position of the individual (acceptor) in the social and communicative structure.
3. Identification with membership in various types of formal locality, kinship, reference, and clique groups and clique-like social arrangements.
4. Group norms relative to the acceptance of changes.
5. Inherent characteristics of change itself.
6. Exposure to various types of mass media . . . sources of farm information, the mediating influence of people, such as individuals and in groups, and the flow of information through interpersonal communicative networks.
7. Situational factors relating to the farming unit.
8. The role of (change) agents in the adoptive process.

Unfortunately, little effort has been made in the field of education to identify the processes of innovation, diffusion, and adoption. The work of Mort,[34] Ross,[35]

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[34] Paul R. Mort and Francis G. Cornell, American Schools in Transition (New York: Bureau of Publications, Teachers College, Columbia University, 1941).

[35] Donald H. Ross (ed.), Administration for Adaptability (New York: Metropolitan School Study Council, 1958).

Cocking,[36] Brickell,[37] and Miles,[38] as examples, do give some clues to the complexity of the problem of innovation, diffusion, and adoption in the context of the public school system. Some of these works, as well as others, will be examined more closely later in this chapter.

Change agents

The research for which this chapter is being written concentrates on one aspect of the innovation, diffusion, and adoption process; the change agent. Lippitt[39] and other social psychologists with an interest in the dynamics of small groups gave popularization and meaning to this term. Since it was first applied in the middle 1940's to small group processes, the term has been widely used by research workers interested in innovation and the diffusion of innovation.

A change agent can be defined as that person and/or agency concerned with the development, introduction, and adoption of innovations. The literature of rural sociology has variously called this person or agency by such names as "local influential," "opinion leader," "key influential," "adoption leader," or simply as a "leader." (See studies by Lionberger,[40] Welch,[41] Marsh,[42] Ryan,[43] Rogers,[44] and Wilkening.[45]) The following develops a clearer description of change agents:

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[36] Walter Cocking, The Regional Introduction of Educational Practices in Urban School Systems of the United States (New York: Bureau of Publications, Teachers College, Columbia University, 1951).

[37] Brickell, op. cit.

[38] Matthew B. Miles (ed.), Innovation in Education (New York: Bureau of Publications, Teachers College, Columbia University, 1964).

[39] Ronald Lippitt, The Dynamics of Planned Change (New York: Harcourt, Brace, and World Company, 1958).

> . . . the innovators (including the discoverers, inventors, elaborators, systematizers, codifiers, promulgators or decodifiers, and other developers of novelty). Second, the term agent of change includes donors referring to the entrepreneurical organizations responsible for the mobilizing, shaping, transporting, transmitting, merchandising, informing, propagandizing activities of the human carriers of novelty. Finally, the term agents of change refers to acceptors, including the

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[40] Herbert Lionberger, "Some Characteristics of Farm Operators Sought as Sources of Farm Information in a Missouri Community," Rural Sociology, 18 (December, 1953), 327-38.

[41] J. M. Welch and Cooley Verner, "A Study of Two Methods of Diffusion of Knowledge," Adult Education, 12 (Summer, 1962), 231-37.

[42] C. Paul Marsh and Lee A. Coleman, "Farmers Practice-Adoption Rates in Relation to Adoption Rates of Leaders," Rural Sociology, 19 (1954), 180-81.

[43] Bryce Ryan and Neal C. Gross, "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," Rural Sociology, 8 (1943), 15-24.

[44] Everitt M. Rogers, "Opinion Leaders in the Communication of Agricultural Technology." Paper presented at the American Sociological Society Meeting, Seattle, Washington, August, 1958.

[45] Eugene A. Wilkening, "Informal Leaders and Innovations in Farm Practices," Rural Sociology, 17 (September, 1952), 231-37.

> individuals, associations and institutions which absorb the novelty as a part of the "going concerns" which they themselves in point of fact are.[46]

This definition indicates that change agents are not necessarily inventors or even "prime acceptors" but rather are to be found along the innovations continuum as "secondary acceptors," "promulgators," "elaborators," etc. This concept is important to the dissertation for which this review of literature and research is written. Many, perhaps most, of the practices which have been labeled innovative by the Ohio Innovations Study Evaluation Committee are not unique with the districts participating in the study. They are not practices which the district itself "invented" or even practices that district was the "first" in the State to accept. Rather, most of the innovations or innovative practices in the districts considered for the purposes of this research as "highly innovative" districts are being carried on in other districts in the Nation and some other districts in the State. They are not being carried on, however, in the State of Ohio in very many districts. Thus the practices are unique at least in the State, and the districts carrying them on, if not in most cases inventors or prime acceptors, are prime acceptors, promulgators, or secondary acceptors in the State of Ohio. These districts are innovators; they are change agents.

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[46] Paul Meadows, "Novelty and Acceptors: A Sociological Consideration of the Acceptance of Change." Paper presented at the Symposium on Identifying Techniques and Principles for Gaining Acceptance of Research Results of Use of Mass Media in Education, Lincoln, Nebraska, November 24-27, 1963.

Brickell[47] points out that in order for school districts and their administrators to be encouraged to adopt a new practice, they must be able to see this practice functioning within other districts which have characteristics similar to their own. The product of basic research when made operational in "life setting" by some innovative school districts does indeed spur change in many other districts. This dissemination procedure is well substantiated by the research in other areas. (Katz,[48] Marsh,[49] Rogers,[50] Wilkening.[51])

Research on innovation and the diffusion of innovation in such diverse fields as rural sociology, industrial engineering, and anthropology indicates that the unit of adoption is usually the individual. In education studies, the unit of adoption is usually the school system. But, of course, a school system itself is composed of people interacting with each other and reacting to each other.

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[47] Henry M. Brickell, Organizing New York State for Change (Albany: State Education Department, 1961), pp. 65-71.

[48] Elihu Katz, "The Social Itinerary of Technical Change: Two Studies on the Diffusion of an Innovation," Human Organization, 20 (Summer, 1961), pp. 70-82.

[49] Paul C. Marsh and Lee A. Coleman, "The Relationship of Neighborhood of Residence to Adoption of Recommended Farm Practices," Rural Sociology, 19 (December, 1954), pp. 385-89.

[50] Everett M. Rogers, Diffusion of Innovations (Glencoe, Illinois: The Free Press, 1962).

[51] Eugene A. Wilkening, "Roles of Communicating Agents in Technological Change in Agriculture," Social Forces, 34 (May, 1956), pp. 361-67.

The importance of the use of selected group processes and communication skills by change agents in personal contact situations has been demonstrated in studies by Welch,[52] Brodbeck,[53] and Lewin.[54] These studies indicate the importance of personal involvement as opposed to telling by an authority as a key variable in effecting change in human behavior.

Diffusion studies in which social systems having a hierarchy of personnel have been involved, such as those by Brickell,[55] Farnsworth,[56] and Griffiths,[57] have found the single most influential change agent in school systems to be the legally constituted leader, i.e., the superintendent or principal. Brickell,[58] in discussing this, has said:

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[52] Welch and Verner, loc. cit.

[53] May Brodbeck, "The Role of Small Groups in Mediating the Effects of Propaganda," Journal of Abnormal and Social Psychology, 52 (March, 1956), pp. 166-70.

[54] Kurt Lewin, "Studies in Group Decision," Group Dynamics, ed. Cartwright and Zanders (Evanston, Illinois: Row, Peterson Company, 1953).

[55] Brickell, op. cit.

[56] Philo T. Farnsworth, Adoption Processes in Public School Systems (New York: Bureau of Publications, Teachers College, Columbia University, 1940).

[57] Daniel E. Griffiths, "The Elementary School Principal and Change in the School System, Theory Into Practice, II (December, 1963), pp. 278-84. See also John Hemphill, Daniel Griffiths, and Norman Frederiksen, Administrative Performance and Personality (New York: Bureau of Publications, Teachers College, Columbia University, 1962).

> An administrator is powerful because he can marshal the necessary authority, if not the necessary leadership, to precipitate a decision. He may not be, and frequently is not, the original source of interest in a new type of program, but unless he gives it his attention . . . it will not come into being.

But what makes one person innovative or one particular organization innovative? Innovators are characterized, by definition, by an openness; a receptivity to change. Why does one superintendent receive and pass on new ideas and what causes the particular group of individuals in an organization to accept and promulgate change? Some examination of the psychological concepts of openness and closedness is now appropriate.

Openness and Closedness

As indicated in the previous section, the characteristic of innovators or change agents is one of openness to new ideas and practices. The psychological concept of "openness" and its antithesis "closedness" has been examined in some depth by Rokeach and his associates.[59]

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[58] Brickell, op. cit., p. 7.

[59] Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960).

The basic characteristic that defines the extent to which a person's belief system is open or closed is, according to Rokeach, the "extent to which a person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside."[60]

There is much long-standing research in psychology and related fields which has concentrated on open and closed belief systems and no exhaustive listing of these research studies or the literature resulting from them will be attempted here.

Adorno and associates[61] present an exhaustive study on closed belief systems as they explore the authoritarian personality. Fromm[62] has chronicled the events in the development of a closed system in an entire nation. Maslow[63] and

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[60] Rokeach, op. cit., p. 57.

[61] T. W. Adorno, et al., The Authoritarian Personality (New York: Harper, 1950). See also Richard Christie and Peggy Cook, "A Guide to Published Literature Relating to the Authoritarian Personality through 1956," The Journal of Psychology, XLV (April, 1958), pp. 171-99.

[62] Erick Fromm, Escape from Freedom (New York: Farrar and Rinehart, 1941).

[63] Abraham H. Maslow, "Resistance to Acculturation," Journal of Social Issues, 7 (1951), pp. 26-29.

Mikol,[64] among others, have contributed research more directly appropriate to innovation and personality. (Maslow has also written extensively about the authoritarian personality'[65] a classic example of the closed belief system.)

Psychologist-anthropologist Kardiner's[66] research in the area of basic personality structure indicates that cultures take on certain basic characteristics that are reflected in the personality makeup of most who are products of that culture. This also holds true for groups and subcultures and may lend credence to a point of view which suggests that individuals who remain in particular organizations will reflect a basic personality of that organization, which is in turn, of course, affected by the personality of the individuals. Whether or not this is suggestive that closed organizations attract persons with closed belief systems and open organizations attract their personality counterparts presents an interesting issue. Since, as will be discussed in some length in the final section of this chapter, at least a portion of the energy of an organization is spent in maintaining that organization, it would seem that an organization would nurture and attract individuals of a personality type which would not threaten the organization.

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[64] B. Mikol, "Open and Closed Belief Systems as Correlates of the Acceptance of New Music and Its Composers" (Ph.D. dissertation, Michigan State University, 1958).

[65] Abraham Maslow, "The Authoritarian Character Structure," Journal of Social Psychology, 18 (1943), pp. 401-411.

[66] Abram Kardiner, The Individual and His Society (New York: Columbia University Press, 1939). Abram Kardiner et al., The Psychological Frontiers of Society (New York: Columbia University Press, 1945).

Merton[67] raises this same question as he developed research about the bureaucratic organization of government and the personality structure of individuals working within the bureaucracy. He concludes that certain similar individual personality types are drawn to this type of organization and indeed maintain the organization long after true function has ceased to exist. Much earlier works by Hughes[68] are generally supportive and illustrative of this point of view.

Halpin and Croft[69], among others,[70] have suggested that just as individuals can be open or closed, so might organizations. The personality of an individual is likened to the climate of an organization.[71]

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[67] Robert K. Merton, "Bureaucratic Structure and Personality" in Clyde Kluckhohn and Henry A. Murray, Personality (New York: Alfred A. Knopf, 1962), pp. 376-385.

[68] E. C. Hughes, "Personality Types and the Division of Labor," American Journal of Sociology, 33 (1928), pp. 754-68 and "Institutional Office and the Person," American Journal of Sociology, 43 (1937), pp. 404-14.

[69] Halpin and Croft, op. cit., p. 1.

[70] Daniel Griffiths, "Administrative Theory and Change in Organizations," Innovation in Education, ed. Matthew Miles (New York: Teachers College Bureau of Publications, 1964); Daniel Griffiths, "The Nature and Meaning of Theory," Behavioral Science and Educational Administration, the 63rd Yearbook of the National Society for the Study of Education, Part II, ed. Daniel E. Griffiths (Chicago: University of Chicago Press, 1964); Harry Randles, "Relationship between Climate and Attitudes of Beginning Elementary Teachers" (Ph.D. dissertation, The Ohio State University, 1964); Robert J. Brown,

Too, Miles[72] writing about the subject of educational innovation, or lack of it, has submitted that "the invention, adoption, adaptation, and diffusion of educational innovations depends very centrally on the state of the immediate social systems--schools and colleges--in which they are to become operative." Therefore, Miles states, attention to the structure and functioning of educational organizations becomes essential if the processes of educational improvement are to be understood and controlled in any coherent way.[73] Abbott,[74] among others, is generally supportive of this point of view.

"Identifying and Classifying Organizational Climates in Twin Cities Area Elementary Schools" (Ph.D. dissertation, University of Minnesota, 1964); Gordon Hearn, Theory Building in Social Work (Toronto: University of Toronto Press, 1958), pp. 44-50.

[71] The term "organizational climate" did not originate with Halpin and Croft. See, for example, Chris Argyris, "Some Problems in Conceptualizing Organizational Climate: A Case Study of a Bank," Administrative Science Quarterly, II (March, 1958), pp. 501-520.

[72] Matthew B. Miles, "Education and Innovation: The Organization as Context." Paper read at Career Development Seminar, University Council for Educational Administration, held at Auburn University, Auburn, Alabam, October 25-28, 1964.

[73] *Ibid.*, p. 2.

[74] M. G. Abbott, "Hierarchial Impediments to Innovation in Educational Organizations." Paper read at Career Development Seminar, University Council on Educational Administration, Auburn University, Auburn, Alabama, October 26-28, 1964.

Most studies of innovation, Miles points out, in or out of educational systems, have centered on the characteristics of the individual innovator, the innovation itself, its diffusion across systems, etc., with little attempt being made to analyze the structure and functioning of the innovation-receiving system as a context for innovation.[75]

The study for which this chapter is being written provides for some analysis of the type Miles is suggesting. The locus of the current researcher's study is the central office of highly innovative and non-innovative school districts. The concluding section of this chapter will be devoted to a review of some of the pertinent literature and research relative to organization and administration as it might especially pertain to innovation in the school setting.

Organization, Administration, and Change

Albright has written:

> If education, at all levels, is required to perform major roles in the culture dynamics of change-rate and direction (while maintaining appropriate consistency and stability), it must be personified by effective agents of change in its administrative leaders. Perhaps one of the most important roles of the administrative leader is that of an innovator. Many persons would argue that this is the central role for one who heads a school system, a college or a university. Whatever the degree of importance granted, his effective behavior in the arduous task of innovation is a function of general compliance with certain principles which have stood empirical tests, if not in education in other fields. These

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[75] Miles, op. cit., p. 3.

> principles related to the involvement of appropriate persons in the innovative process, the interpretation and dissemination of information, the identification of goals and purposes, the sources of resistance to change, the probable effects of specific change in related aspects of culture, the roles of the innovator and others in the process of change, the social-psychological functioning of groups, structures, and the explicit values and beliefs of participants.[76]

Campbell, Corbally, and Ramseyer write, however, that change must be of two kinds; change in individual staff members and institutional change.[77] The suggestion is made that program changes

> for the total institution emanate from changes in individuals . . . ; but some effort needs to be made to group these changes [in some meaningful way]. Leadership and co-ordination on the part of administrators should provide not only the climate for change to occur, but the procedures by which changes in individuals can add up to systemwide or institutional changes.[78]

The multifunctional organization

Most theoretical models support the view of the organization as multi-functional. In order to be effective, that is, in order to achieve the goals of the organization, organizations devote a part of their resources to other functions such as the creation of further means to the goal, the maintenance of the units performing the goal activities, and the social integration of these units.

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[76] A. D. Albright, "An Administrative Staff College for Education," Preparing Administrators: New Perspectives, ed. Jack A. Culbertson and Stephen P. Hencley (Columbus: University Council for Educational Administration, 1962).

[77] Roald F. Campbell, John E. Corbally, and John A. Ramseyer, Introduction to Educational Administration (Boston: Allyn and Bacon, Inc., 1962), p. 229.

[78] Ibid.

For example, the public school organization secures the support of the community by stating academic achievement as a major goal. This is an end to which part of its resources are devoted. But, some resources must also be devoted to the personal needs satisfaction of the organizational members which are not directly related, and indeed may be antagonistic, to achieving the stated goals of the organization.

Etzione[79] argues persuasively from this perspective in determining the effectiveness of an organization. He maintains that a proper goal model for determining organizational effectiveness would show that the organization has different goals from the ones it claims to have, particularly from its publicly stated goals. The public goals are intended to enlist the support of the public to the organization; support which in all probability would not be forthcoming for its private goals. However, the private goals--organizational maintenance, service and custodial functions--are as essential to the continuing existence and effectiveness of the organization as the public goals.

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[79] Amitai Etzioni, "Two Approaches to Organizational Analysis: A Critique and a Suggestion," Administrative Science Quarterly, 5 (September, 1960), pp. 257-278.

If an organization were to invest all of its resources to the realization of its public goals, there would be threat of a complete breakdown of the system so that even the attainment of the public goals would become unlikely.

Getzels[80] takes account of the multi-dimensional nature of organizations when he conceptualizes both a nomethetic and idiographic dimension. The administrator's role in such a model is to mediate between and to harmonize potentially conflicting forces in the organization.

Thus there is pictured the need not only for task accomplishment within the organization but also the social needs satisfaction of individuals operating in the organization. The more congruence the chief administrator is able, by his actions, to bring about between the needs of the individuals in the organization and the needs (task accomplishments) of the organization, the more likely the organization is to move toward its goals.

Early literature with respect to organization, as evidenced by Barnard,[81] advanced the concept that organizations must be concerned with both effectiveness and efficiency. To Barnard, effectiveness meant the achievement of the goals of the institution, while efficiency reflected their achievement with appropriate regard for the people in the organization. In the same vein, The Personnel Research Board at the Ohio State University, in studies of status of official leaders of organizations, discovered two major dimensions of effective leadership; initiating structure in group interaction and consideration.[82] Argyris too, has postulated the same conditions in his study of personality conflict and organization.[83]

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[80] Jacob W. Getzels, "Administration as a Social Process," Administrative Theory in Education, ed. A. W. Halpin (Chicago: Midwest Administration Center, University of Chicago, 1958), pp. 151-159.

[81] Chester J. Barnard, The Functions of the Executive (Cambridge: Harvard University Press, 1938).

Pertinent administrative theory

The administrative theory developed by Guba and Getzels[84] presents the preceding quite clearly. In every institution there are certain expectations which express the norms for behavior in that institution. These norms are essentially goal-oriented. But, the theory shows, institutions are composed of people and these organization members have need-dispositions that also become pertinent to the behavior of people in the organization.

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[82] Ralph M. Stogdill and Alvin E. Coons, Leader Behavior: Its Description and Measurement (Columbus: Bureau of Business Research, The Ohio State University, 1957).

[83] Chris Argyris, Personality and Organization (New York: Harper and Brothers, 1957).

[84] Jacob W. Getzels and Egon G. Guba, "Social Behavior and the Administrative Process," School Review, LXV (Winter, 1957), pp. 423-41. See also, Roald Campbell, "Implications for the Practice of Administration," and Daniel E. Griffiths, "The Nature and Meaning of Theory," Behavioral Science and Educational Administration, the 63rd Yearbook of the National Society for the Study of Education (Chicago: University of Chicago Press, 1964).

Administration in the Getzels-Guba model is conceived as a hierarchy of subordinate-superordinate relationships within a social system. In function this hierarchy is the locus for allocating and integrating roles and facilities in order that the goals of the social system may be realized. There are two dimensions to the social system: the nomethetic which consists of institution, role, and expectation; and the idiographic which consists of the individual, his personality, and his need-disposition.

It is hypothesized by Getzels that there are three types of conflict to be found in organizations. "Role-personality conflicts" occur when there is discrepancy between the expectations attached to a given role and the pattern of need-dispositions of the individual to whom the role is assigned. "Role conflicts" occur whenever the individual to whom the role is assigned is required to conform simultaneously to a number of inconsistent or contradictory expectations, so that adjustment to one set of requirements makes adjustment to another outside the realm of possibility. "Personality conflicts" occur when there are opposing needs and dispositions with the personality of the individual assuming the role.

These three types of conflict represent incongruence in the nomothetic and idiographic dimensions, and in the interaction of the two. Griffiths[85] points out that "within the framework of the theory, it may be generalized that such incongruence is symptomatic of administrative failure and leads to loss of productivity in both the individual and the organization."

Organizational climate

Halpin and Croft[86] in their research into organizational climate deal with both dimensions in the Getzel theory. In fact, an open climate is defined as one in which there is attention to both task achievement and social-needs. The closed climate is defined as one which marks a situation in which the group members obtain little satisfaction in respect to either task achievement or social-needs. In short, it is a situation where the superintendent is ineffective in directing the activities of the staff and at the same time he is not inclined to look out for their welfare.[87]

The operational definition given to open climate emphasizes that this is a situation in which organizational members derive high levels of satisfaction both from their interpersonal relations with fellow workers and from accomplishment of the tasks assigned to them by the organization.

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[85] Ibid., p. 103.

[86] Halpin and Croft, op. cit.

[87] Ibid., p. 66.

Guest's research[88] is supportive of the thesis that the educational administrator who wishes to provide for productive change needs to promote the open climate. Guest's study of successful change in an industrial organization basically chronicled the change from a closed to an open organizational climate.

In terms of organizational climate, Halpin and Croft[89] have identified six climates, from "open" at one end of a continuum to "closed" at the other. They found that a school possessing an open climate, which they deemed as most effective, was a lively organization, moving toward its goals while at the same time providing satisfaction to the members of the organization. (Chapter I contains the basic elements of the Halpin and Croft organizational climate.)

An important aspect in the effective leadership of an organization is the perceptions of the leader held by the group with which he is working, as well as the perceptions of the group which the leader holds. Some comment has already been made by the writer relative to the importance of perceptual congruence.

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[88] Robert H. Guest, Organizational Change: The Effect of Successful Leadership (Homewood, Illinois: Dorsey Press, Inc., and Richard D. Irwin, Inc., 1962).

[89] Halpin and Croft, op. cit.

Helpin and Croft discussing the principal of an open, and thus effective, school characterize him as follows:

> The behavior of the principal represents an appropriate integration between his own personality and the role he is required to play as principal. In this respect his behavior can be viewed as "genuine." Not only does he set an example by working hard himself (high Thrust) but, depending upon the situation, he can either criticize the actions of teachers or can, on the other hand, go out of his way to help a teacher (high Consideration). He possesses the personal flexibility to be "genuine" whether he be required to control and direct the activities of others or be required to show compassion in satisfying the social needs of individual teachers. He has integrity in that he is "all of a piece" and therefore can function well in either situation. He is not aloof, nor are the rules and procedures which he sets up inflexible and impersonal. Nonetheless, rules and regulations are adhered to, and through them, he provides subtle direction and control for the teachers. He does not have to emphasize production; nor does he need to monitor the teachers' activities closely, because the teachers do, indeed, produce easily and freely. Nor does he do all the work himself; he has the ability to let appropriate leadership acts emerge from the teachers (low Production Emphasis). Withal, he is in full control of the situation and he clearly provides leadership for the staff.[90]

The term "genuine" is used by Halpin and Croft in much the same way that Argyris uses the concept of "authenticity."[91] Authentic relationships are, thus, those kinds of relationships in which an individual enhances his sense of self- and other-awareness and acceptance in such a way that others can do the same. He is, in other words, what he appears to be.

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[90] Ibid., pp. 61-62.

[91] Chris Argyris, Interpersonal Competence and Organizational Effectiveness (Homewood, Illinois: The Dorsey Press, Inc., 1962), p. 21.

One of the guiding assumptions of the Halpin and Croft work as well as of this research is that an organizational climate which will be most effective will be one in which it is possible for acts of leadership to emerge easily from whatever source. One essential determinant of a school's effectiveness noted by Halpin and Croft[92] was the ascribed leader's ability, or lack of ability, to create a climate in which he and the other group members could initiate and consummate acts of leadership.

> If an organization is to accomplish its tasks, leadership acts must be initiated. However, it should be noted that we do not assume that leadership acts need be confined exclusively to the designated leader, himself. Such acts can be initiated either by the leader or by members of the faculty. If the leader fails to provide sufficient leadership acts--and leadership acts of sufficient "quality," in that they are "accepted" and that they also lead to increased group "effectiveness"--then members of the group will seek to offer the "leadership" required to make the group "effective." In this view we have been supported by the central finding that pervades all research on leadership and group behavior: An "effective" group must provide satisfaction to group members in two major respects; it must give a sense of task-accomplishment, and it must provide members with the social satisfaction that comes from being a part of a group.[93]

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[92] Halpin and Croft, op. cit., pp. 7-8.

[93] Ibid., p. 8.

And, as the authors note, this is simply a paraphrase of Barnard's insistence that a group be both "effective" and "efficient."[94]

Administrative structure

Frequently, as has been shown in the first section of this chapter, the most important factor in change-rate is access to ideas and concepts of others. An administrative structure which operates to inhibit the free flow of ideas and leadership acts, from whatever the source of those ideas and acts, retards the growth and orderly change of the organization.

And so someone, somewhere in the organization must decide to change, or be intrigued with a new idea and help someone else decide to effect a change. Tantamount to the success of bringing this change about is "openness" within the organization and free flow of communication.

In a hierarchical organizational arrangement such as is found in an educational system, it would seem that the superintendent would be the key to the innovative process. He certainly must pass judgment upon the acceptability of the change--or even on the decision to examine the change. At the very least he must have created the image of himself as receptive to new ideas and operate in such a way that others in the organization feel free to either bring ideas to him or to pursue on their own, ideas which seem to have merit.

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[94] Chester I. Barnard, The Functions of the Executive (Cambridge: Harvard University Press, 1938).

Some would quarrel that the superintendent is not this powerful; that a district could well be innovative and not have a very innovative leader. This research worker is not saying that the superintendent is all-powerful and spends his time passing judgment on this or that idea. He is saying that unless there is a style of leadership which enables others in the organization to feel free to let their own ideas emerge without threat and which reflects a receptivity to these ideas and any others regardless of their source, there will be little the organization will do but maintain the status quo.

Brickell[95] seems to find that the chief administrator was the single greatest enhancer or inhibitor of innovation. Griffiths in his study of the relationship of the elementary school principal to the change process[96] found this group seldom responsible for the introduction of a new idea to a school system. He concluded that the reason was largely that the elementary principal was at least three steps away from the "top" even in a small school district. Concluded Griffiths:

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[95] Brickell, op. cit.

[96] Daniel E. Griffiths, "The Elementary-School Principalship and Change in the School System," Theory into Practice, II (December, 1963), pp. 278-284.

> It seems, therefore, that if we are to have change in school systems, we cannot look to the principal to initiate this change. The initiative for change must come from the top. Once change is sanctioned by his superiors, the principal will work to effect that change at the building level.[97]

In much earlier studies, Mort and Cornell spoke to this same point.[98] They noted that in their study in "90 per cent of past adaptations, the superintendent has taken an active part as leader, supporter, or follower" and that in over half of the cases his position has been that of leader. Their study again reflects that it is highly important to a district's adaptability that the superintendent maintain his leadership through its "quality" rather than because of any hierarchy involved.

> It appears from our study that the trend toward delegating functional responsibility and maintaining control not so much through a line of responsibility but through coordination and leadership is that form of school organization most conducive to adaptability.[99]

Thus we can view the attitudes of central office personnel as critical to change in the organization, especially as those attitudes set the tone for the organization. The superintendent's role is one at least of a key facilitator of change, if not a prime innovator. His actions, attitudes, and style of administration may be such as to inhibit his subordinates from seeking change; indeed, he may attract to the central office those only interested in maintaining the status quo, or it may be such to encourage much interest among staff in seeking the new.

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[97] Ibid., p. 283.

[98] Paul R. Mort and Francis G. Cornell, Adaptability of Public School Systems (New York: Bur. of Publications, Teachers College, Columbia University, 1938).

[99] Ibid., p. 224.

Together the attitudes and perceptions of the central office group may reflect the "personality" of the system as a whole. At the least, of course, and by definition, it reflects the personality of the central office. This "personality" has been defined as organizational climate. Climate is to the organization what personality is to the individual.[100]

Summary

This chapter has been concerned with an examination of the research and literature relative to the change process, the psychological concepts of openness as it seems to relate to adaptability and change, and to an examination of change within the organizational setting. The first two sections of the chapter created a logical framework within which this research is conducted. The third section has indicated the framework whereby the organization is to be studied and has revealed pertinent findings from other research which show the central office to be of some importance in the adaptability of a school district.

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[100] The term organizational climate seems to have been originated by Chris Argyris.See Chris Argyris, "Some Problems in Conceptualizing Organizational Climate: A Cast Study of a Bank," Administrative Science Quarterly, II (March, 1958), pp. 501-520.

The research and literature reported in this chapter lends credence to the suggestion that central office or more properly, central office climate, is indeed a contributing cause of innovativeness or lack of it in a school district. The research which follows is designed to inquire more deeply into this suggestion.

Chapter III will contain a discussion of the methodology and design of the research.

CHAPTER III

METHODOLOGY AND DESIGN OF THE RESEARCH

The current researcher has, through the Ohio Innovations Study discussed in Chapter I, a population from which he can examine possible relationships of innovation in the school district setting and organizational climate, or elements thereof. There has also been described in Chapter I an instrument, the OCDQ, which will be used to describe the organizational climate of highly innovative and non-innovative districts included in the study. The examination of pertinent research and literature in Chapter II has further developed the problem and has explored pertinent existing data about innovation, the psychological concepts of openness and closedness, and the concepts of administrative organization which relate to the problem. This chapter will deal with the specific methodology employed and develop the design of the research.

The first step in the development of the research was aimed at discovering districts which could be labeled "highly innovative" and "non-innovative." These terms need definition.

The label "highly innovative" was reserved for those twenty districts participating in the Ohio Innovations study which had the highest number of on-going practices labeled as innovative by the evaluation committee of The Ohio Innovations Study. For the criteria used in determining whether or not a practice was labeled as innovative, the reader is referred to Chapter I. The "non-innovative" label was to be attached to those twenty districts which had the least number of innovative practices on-going, among those participating in the original Ohio Innovations Study.

There were applied two other criteria which served to modify the list of school districts to be used in the research. First, in order to secure sufficient group size for the application of the OCDQ, the districts in the study were required to have a central office administrative performance team of at least five members. This minimum size provided for sufficient diversity of function and role to provide complex interaction patterns. This did eliminate smaller districts from the study, however.

Second, since a considerable portion of the "Climate" is dependent upon individual group member's perceptions of the superintendent's behavior, it is important that the superintendent be the same one holding tenure at the time of the original Ohio Innovations Study, which was conducted during the 1963-64 school year. Thus, districts which had experienced a change in superintendents since the 1963-64 school year were not included in the study.[101]

Selection of Districts in the Research

The first task, then, became that of the selection of highly innovative school districts in Ohio. As stated, this was to be accomplished by discovering those districts which had the most practices on-going which could be described as innovative. Programs evaluated as "Describe" or "Visit" by the Ohio Innovations Evaluation Committee were to be considered definitely innovative (see Chapter I).

A problem arose about how to treat programs evaluated as "List." It will be remembered that this category was reserved by the evaluating committee in the Ohio Innovations Study for practices which could not be labeled non-innovative, i.e., "Don't List" but which either did not meet all the criteria established for a practice to be labeled "innovative" or for which there remained some doubt in committee members' minds as to the innovativeness of the practice. The category was also reserved for practices which, if they were not highly innovative, were at least practices of some educational significance which were being exceptionally well carried out.

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[101] Tables 1 and 2 reveal the original highly innovative and non-innovative districts before these criteria were applied.

In other words, many of these practices could well be highly innovative, but the evidence was not considered to be as strong as it was for those practices labeled "Describe" and "Visit."

Examination of the compiled raw data revealed that the "List" category contained a considerable number of practices. With such a high number of practices, it was felt some consideration ought to be given the category as a factor contributing to the selection of highly innovative school districts.

Obviously, however, the numbers of practices in this category should not be treated as of equal power as practices felt to be definitely innovative. Some type of weighting appeared necessary. A value would have to be assigned.

The question became one of selecting a numerical value which would express an appropriate difference in power between the "Visit-Describe" category and the "List" category. In the final analysis any assigned value difference would be in the realm of subjective judgment. This being so, the researcher assigned the value of 2 to the "Visit-Describe" category and 1 to practices in the "List" category. The only argument that can be offered is that this does differentiate between the two categories in such a way as to lend more importance to a practice which met all the criteria of innovativeness and received overwhelming consensus as an innovative practice by the committee.

Whether these practices are only "half as innovative" or whether only half of those in the "List" category are "truly" innovative is not the issue. The issue was one of allowing some credit, in effect, for these practices, without allowing them to dominate the study and thus possibly distort the findings.

In the judgment of the statistician[102] who assisted the writer, such a weighting of 2 to 1 would not result in statistical differences because of purely arbitrary numerical weightings. Once the preceding decision was made, the task became one of "totaling the score," so to speak, to discover those districts which were to be called highly innovative.

All of the data collected by the "Ohio Innovations Study" had been punched in IBM cards. The writer needed to discover, for each of the 313 districts which had participated in the study, the number of practices labeled "Visit," "Describe," and "List." The cards were sorted and a frequency count run on column 11 of the card (the rating column) for each district. Column 11 was punched either 1, 2, 3, or 4 which indicated whether a practice had been evaluated as "Visit," "Describe," "List," or "Don't List."

This was tabulated for each district and a "print-off" made. The writer then had available a complete listing of all 313 districts in the study and the number of practices labeled "Visit," "Describe," "List," and "Don't List" in each district.

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[102] Bert L. Price, Statistician, Mathematical Computation Laboratory, The Ohio State University, in consultation with the researcher, October, 1964.

The next step involved multiplying those practices in the first two categories ("Visit" and "Describe") times 2 and adding this figure to the number in the third category ("List") to arrive at the figure to be used to determine relative innovativeness.

Following this, the writer selected the top twenty districts in the study. These he labeled "Highly Innovative." (It should be noted that, as it happened, no district made this sample, solely on the basis of a large number of "List" category practices. All had a number of practices categorized as "Visit or Describe.") Because a few school districts had like scores, this list was actually composed of 22 districts (Table 1).

Next he applied the criterion that districts in the study must have at least five members on their central office administrative performance team.[103] Application of this criterion required five districts to be dropped from the list.

A second criterion was applied. Since the organizational climate to be described seems to center on the

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[103] Educational Directory (Columbus, Ohio: State of Ohio, Department of Education, 1963-64); Educational Directory (Columbus, Ohio: State of Ohio, Department of Education, 1964-65).

TABLE 1

SELECTION OF HIGHLY INNOVATIVE SCHOOLS IN THE SAMPLE

District	# Practices Rated 1 or 2	# Practices Rated 3	Total	Wgtd. Score	Rank	Type Dist.	# In Central Office	New Supt.
31-1-25	22	8	30	52[a]	1	City	86	No
25-1-29	12	22	34	46	2	"	25	No
18-1-111	8	19	27	35	3	"	9	No
76-1-79	6	21	27	33	4	"	13	Yes[b]
57-1-99	5	10	15	20	5	"	3[c]	No
48-1-127	5	9	14	19	6	"	11	No
31-1-108	9	1	10	19	6	"	8	No
43-1-103	8	2	10	18	8	"	7	No
43-1-150	7	3	10	17	9	"	22	No
18-1-8	2	13	15	17	9	"	6	Yes[b]
78-1-140	4	9	13	17	9	"	14	No
76-1-22	6	4	10	16	12	"	12	No
18-2-11	6	4	10	16	12	Ex.Vill.	2[c]	No
57-3-355	5	5	10	15	14	Local	5	No
71-3-444	6	3	9	15	14	"	1[c]	No
18-1-116	4	6	10	14	16	City	17	No
20-1-35	1	12	13	14	16	"	5	No
77-1-32	1	12	13	14	16	"	8	Yes[b]
18-1-65	5	3	8	13	19	"	12	No
18-1-104	4	5	9	13	19	"	11	Yes[b]
18-1-146	2	8	10	12	21	"	2[c]	No
87-2-52	1	10	11	12	21	Ex.Vill.	2[c]	No

[a] Practices rated 1 or 2 assigned weight of 2. Practices rated 3 assigned weight of 1.

[b] Eliminated because of change in superintendents.

[c] Eliminated because of insufficient number in central office.

superintendent and is dependent upon the nature of superintendent-staff relationships, it was deemed necessary that only those districts which retained the same superintendent in the intervening year between the time of the initial data collection for the Ohio Innovations Study and the collection of data for the current research be included in the study. The application of this criterion caused four additional districts to be removed from the study. This information was available in the 1963-64 and 1964-65 State Educational Directory.[104] Thus, the writer had remaining thirteen "highly-innovative" districts.

Non-innovative districts were selected in much the same way as highly-innovative. The writer sought to select the "bottom" 20 districts in terms of numbers of innovative practices. The term non-innovative as it is used in this research needs explanation. This term refers to the initial 21* districts which had the lowest weighted score of innovative practices, among those participating in the Ohio Innovations Study with an APT of at least five members. As can be seen (Table 2) these districts typically have some practices which have at least been labeled "List." They are, however, the bottom group, and are called for the purposes of this research, "non-innovative."

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[104] Ibid.

*There were 21 districts because some districts had identical "scores."

TABLE 2

SELECTION OF "NON-INNOVATIVE" SCHOOLS IN THE SAMPLE

District	# Practices Rated 1 or 2	# Practices Rated 3	Total	Wgtd. Score	Rank	Type Dist.	# In Central Office	New Supt.
18-1-13	0	1	1	1[a]	1	City	11	No
50-1-21	1	3	4	5	17	"	8	No
18-1-28	0	1	1	1	1	"	16	Yes[b]
57-1-33	1	0	1	2	6	"	15	No
79-1-38	0	4	4	4	12	"	9	No
15-1-41	0	1	1	1	1	"	5	No
29-1-44	0	3	3	3	10	"	7	No
18-1-45	0	2	2	2	6	"	5	Yes[b]
72-1-49	0	2	2	2	6	"	7	No
18-1-52	0	4	4	4	12	"	8	No
4-1-53	1	0	1	2	6	"	6	No
78-1-54	1	3	4	5	17	"	7	No
70-1-74	2	1	3	5	17	"	16	No
84-1-76	1	1	2	3	10	"	5	Yes[b]
9-1-84	0	1	1	1	1	"	14	No
35-1-87	0	4	4	4	12	"	5	No
18-1-124	0	4	4	4	12	"	9	No
25-1-145	2	1	3	5	17	"	9	Yes[b]
85-1-152	2	1	3	5	17	"	6	No
29-1-154	0	1	1	1	1	"	17	Yes[b]
50-1-155	2	0	2	4	12	"	19	No

[a] Practices rated 1 or 2 assigned weight of 2. Practices rated 3 assigned weight of 1.

[b] Eliminated because of change of superintendents.

From the same frequency count used for determining the highly-innovative districts were determined those districts with the lowest innovations score. These districts were subjected to the criterion requiring them to have at least five members on the APT.[105] The districts surviving the application of this criterion are shown in Table 2.

Next, the writer again went to the 1963-64 State Educational Directory and the 1964-65 State Educational Directory[106] to determine which, if any, had new superintendents. Five districts were found to have new superintendents and were eliminated from further study. Thus, the number of non-innovative districts became 16 districts.

Data Collection

Once the districts to be included in the study were determined, the next step was to secure the cooperation of these districts. It will be remembered that the writer was personally to administer the OCDQ to the administrative performance team of the central office in a particular district, collectively, at one sitting.[107]

Because of the small number of districts identified for the study, it was important that most agree to be a part of the study. The writer made the initial contact to these districts by letter to the respective superintendents on March 22, 1965. (A copy of the initial contact letter may be found in Appendix B.) He followed up each of these letters one week later with a telephone call to the superintendent of each district at which time he received the superintendent's answer as to whether or not he would agree to have his district's central office participate. After receiving an affirmative answer, the researcher arranged a specific date and time for the administration of the questionnaire. Thirteen of the non-innovative districts agreed to participate and eleven of the highly innovative agreed to participate. Table 3 shows the pertinent data about the districts which were finally included in the study.

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[105] Ibid. [106] Ibid.

[107] Administrative performance team as operationally defined in Chapter I includes supervisors, directors, etc., as well as administrators.

The months of April and May, 1965 were spent visiting the school districts included in the study for the purpose of administering the OCDQ. By May 7 all the data were collected. The collected data were then taken to the Numerical Computation Laboratory at The Ohio State University for processing. The first step became that of transferring the data from the questionnaire to IBM cards so that the various compilations and statistical procedures could be performed. Districts were identified on the IBM cards by a code number of three digits.

TABLE 3

SCHOOL DISTRICTS WHICH PARTICIPATED IN THE STUDY

District[a]	Wgtd. Score	Type District	District[a]	Wgtd. Score	Type District
25-1-29 (005)	46	City	50-1-21 (103)	5	City
18-1-111 (009)	35	"	70-1-74 (113)	5	"
48-1-128 (003)	19	"	85-1-152 (110)	5	"
31-1-108 (010)	19	"	79-1-38 (111)	4	"
43-1-103 (006)	18	"	18-1-52 (109)	4	"
43-1-150 (001)	17	"	35-1-87 (106)	4	"
78-1-140 (008)	17	"	18-1-124 (105)	4	"
76-1-22 (012)	16	"	50-1-155 (107	4	"
57-3-355 (004)	15	Local	57-1-33 (112)	2	"
18-1-116 (007)	14	City	72-1-49 (101)	2	"
18-1-65 (002)	13	"	4-1-53 (104)	2	"
			18-1-13 (102)	1	"
			15-1-41 (108)	1	"

[a] At this point, a new code number was assigned for more convenience in punching the data on IBM cards. This new number is listed in parenthesis. Numbers beginning with 0 indicate an innovative district; numbers beginning with figure 1 indicate a non-innovative district.

Analysis of Data

In order to test the hypotheses of this study, it was necessary to compute, district by district, a district-mean subtest score for each of the 8 subtests. These scores define the "average" response of the APT members for each respective subtest. The mean scores (raw means) were obtained for each of the 24 districts participating in this study and are shown in tabular form in Appendix D. Then a mean score for the 11 innovative districts as a group (mean of 11 means) was calculated for each subtest. Mean scores for the 13 non-innovative districts on each subtest were similarly calculated.

So that the districts could be compared individually as well as by sample type, i.e., highly innovative or non-innovative, with the prototypic profile of open and closed climates developed by Halpin and Croft,[108] it was necessary to convert the raw means, by subtest, per district to double-standardized scores with a mean of 50 and a standard deviation (s.d.) of 10. Thus, the scores were standardized twice: first, normatively, and second, ipsatively.[109]

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[108] Halpin and Croft, op. cit., pp. 3 and 59.

[109] The current researcher's only reason for converting the raw scores into double standardized scores was to allow him to compare the districts in his research to the prototypic profiles developed by Halpin and Croft. Halpin and Croft's reasons for double standardizing their raw scores were for initial development of the instrument and are more fully explained in Halpin and Croft, op. cit., pp. 55-56.

Normatively, the subtest scores were standardized across the sample of 24 districts. Thus, each subtest was standardized according to the mean and standard deviation of the total sample for that subtest. The standardization formula used is:

$$z_{ii} = \frac{x_{ii} - \bar{X}_i}{s.d.\bar{X}}$$

Where:

z_{ii} = the standard score

x_{ii} = raw score

$\bar{X}_i$ = population mean

$s.d.\bar{X}$ = s.d.(population variance)

These standardized scores were then standardized again, this time, ipsatively (within each district). Accordingly, all the subtest scores were standardized with respect to the mean and standard deviation of the profile scores for each district. These standard scores by definition have a mean of zero and a variance of one. The standard scores were then converted to standard scores with a mean of 50 and a standard deviation of 10 by the following formula:

$$10(\text{standardized score}) + 50 = \text{standard score with a mean of 50 and s.d. of 10.}$$

The 8 standardized scores for each district will be referred to as the profile for that district. The next step was to obtain a mean of the 11 innovative districts' standardized scores on each subtest so that a prototypic profile for the innovative districts as a group could be constructed. Similarly, a profile for the non-innovative districts as a group was constructed. These calculations having been performed, it was possible to test the first hypothesis.

Testing the hypotheses

The first hypothesis states:

> Highly innovative school districts' administrative performance teams will evidence a climate which can be described as more "open" than will non-innovative school district administrative performance teams.

In order to test this hypothesis, it was necessary to compare each of the 24 district's profiles, as well as the composite profile for innovative and non-innovative groups, to the prototypic profiles of open and closed organizational climates developed by Halpin and Croft[110] (Table 4).

TABLE 4

PROTOTYPIC PROFILE SCORES

	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Open	43[a]	43	63	50	42	43	61	55
Closed	62	53	38	54	55	54	41	44

[a]The numbers represent double-standardized scores (both normatively and ipsatively), with a mean of 50 and a standard deviation of 10.

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[110] Halpin and Croft, loc. cit.

The method used to compare the profiles obtained in this study to those of Halpin and Croft to determine which districts tended to be open and which closed was that of constructing profile similarity scores. A similarity score was obtained by computing the absolute difference between each subtest score in a district's profile to the corresponding subtest score in each of Halpin and Croft's open and closed profile scores. Then the absolute differences between the profile scores for each district and the open and closed prototypic profile scores developed by Halpin and Croft were summed. (See Tables 6 and 7, Chapter IV.) The lower the sum, the more similar are the two profiles. Thus, a district tended to be more open if a lower similarity score was obtained by comparing it to the open profile than that obtained by comparing it to the closed profile, and vice versa. A similar procedure was followed in determining whether the innovative and non-innovative districts' profile scores tended to be open or closed.

These procedures having been followed, the researcher had compared highly innovative districts as a group and the non-innovative districts as a group to Halpin and Croft's profiles and was now in a position to state whether innovative districts tended to be more "open" and non-innovative districts more "closed." He had also taken the process one step further to point out any atypicalness that might exist within the two groups. This was done by comparing each individual profile with the Halpin and Croft prototypic profiles.

The writer is then in a position to say whether or not the hypothesis holds. He is also able to show exceptions existing within the two groups by comparing districts individually with the prototypic profile.

The first phase of this research is a gross one and in effect sets the stage for the remainder of the research. The rest of the research concentrates on a subtest by subtest analysis. It is concerned, largely, with determining which elements appear as more related to the innovative process, as well as with testing the specific hypotheses.

The remaining hypotheses will be tested through the use of a t test of the means. A parametric distribution of the sample is assumed. The number of innovative districts and non-innovative districts is 11 and 13 respectively. A t test of the means for independent samples was applicable for this study. This test does not require that the two samples be equal in number.

Significance will be checked at three levels: 1%, 5%, and 10%. In exploratory research, such as the current study, it is important to use, in addition to the usual rigid tests of significance, a less rigid test. The research is tapping a possible cause of innovativeness in the school district setting that has not yet been adequately subjected to research. The guideposts are few. It would seem unreasonable to apply the same significance level that is appropriate in more fully charted research. Thus, the 10% level is introduced in addition to the more rigid levels. At the least, an item which is significant at the 10% level is suggestive.

The second hypothesis states:

> Significant differences between highly innovative school districts and non-innovative school districts will be shown to exist in the elements of organizational climate associated with the group behavior characteristics.
>
> Corollary 1. Highly innovative districts will be significantly less "disengaged" than will non-innovative districts.
>
> Corollary 2. Highly innovative districts will reflect a significantly lower "hindrance" than will non-innovative districts.
>
> Corollary 3. Highly innovative districts will exhibit a significantly higher "esprit" than will non-innovative districts.

The significance of three elements of the group dimension of organizational climate is being tested here. The procedure is to compute the raw mean scores of the highly innovative group in each subtest and compare them with the raw mean scores in the non-innovative group.

The third hypothesis states:

> No significant differences will be found to exist between highly innovative and non-innovative school districts in the "intimacy" element of group behavior characteristics.

In Halpin and Croft's research relative to open and closed organizational climate, it was discovered that even in very closed organizational climates members obtained satisfaction from their friendly relations with other members and achieved an average "intimacy." Similarly, on the whole, in open climates group members enjoy friendly relations with each other but they apparently feel no need for an extremely high degree of "intimacy."

The same procedure is followed as was used on testing the second hypothesis except that a two-tailed t-test is used since this hypothesis is stated in the null form.

The fourth and final hypothesis and its corollaries state:

> Significant differences between highly innovative and non-innovative school districts will be shown to exist in the elements of organizational climate associated with superintendent's behavior characteristics.
>
> Corollary 1. In highly innovative school dis-districts, superintendent's behavior will reflect a significantly lower "aloofness" than will superintendent's behavior in non-innovative districts.
>
> Corollary 2. In highly innovative school districts, superintendent's behavior will reflect a significantly lower "production emphasis" than will superintendent's behavior in non-innovative districts.
>
> Corollary 3. In highly innovative districts, superintendent's behavior will reflect a significantly higher "thrust" than will superintendent's behavior in non-innovative districts.
>
> Corollary 4. In highly innovative school districts, superintendent's behavior will reflect a significantly higher "consideration" than will superintendent's behavior in non-innovative districts.

This hypothesis deals with the dimension of organizational climate which has to do with the superintendent's behavior. All elements of this dimension are hypothesized to reveal significant differences between the highly innovative and the non-innovative. As in hypotheses two and three, this is tested by comparing the total mean scores of the highly innovative group with the total mean scores of the non-innovative group in the study.

Since the direction of the difference between the subtest scores of the innovative and non-innovative districts had been predicted in hypotheses two and four, a one-tailed test of significance was used to test these two hypotheses. The two-tailed test was applied to hypothesis three concerning "Intimacy" since no difference was predicted. As Ferguson[111] states the problem: "A one-tailed test is used where the investigator's a priori speculation predicts a difference in one direction only."

Reliability study

After the treatment of the hypotheses, the reliability study is reported. Since the writer was concerned with the dependability of the group's perception of the "organizational climate," a method of computing the reliability was selected which provided a measure of how well the APT perceived the "organizational climate" as a group.

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[111] George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Co., Inc., 1959).

A correlation was run between the odd and even APT members' scores in each district, subtest by subtest for all the innovative districts as a whole, and one similarly obtained for the non-innovative districts. Thus, a reliability coefficient was obtained for the innovative districts and one for the non-innovative districts on each subtest. These correlation coefficients (reliability coefficients) provided data for a comparison to see whether the APT in the districts viewed the elements of organizational climate as a group.

Other Aspects to be Examined

As stated in Chapter I, the researcher will examine certain aspects of the school districts participating in the study that, while not playing a role in the major emphasis of the study, are felt to be worthy of examination due to their apparent significance or because they may be of some assistance to future research workers in the field of innovation and administrative organization.

Data was compiled[112] for each innovative and non-innovative district relative to the average daily membership (A.D.M.), the assessed valuation per pupil, the expenditure per pupil, the percent of the total expenditure per pupil that went for instructional costs, and the school tax rate.

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[112] Basic Financial Data of Ohio School Districts, OEA Research Report (Columbus: Ohio Education Association, 1964); Costs Per Pupil in Average Daily Membership in Ohio's City, Exempted Village, and County School Systems, from July 1, 1963 to June 30, 1964 (Columbus: State Department of Education, 1964).

In order to determine whether there were any significant differences between the innovative and non-innovative districts on any of these five factors, the Mann-Whitney U Test was used. These are rank data and an *a priori* examination of the data did not seem to indicate a normal distribution of the factors under consideration. The research worker therefore selected a non-parametric statistic for his tests of significance.[113] The Mann-Whitney U Test was selected because it is the most sensitive of the non-parametric tests. The Mann-Whitney test is said by Siegel[114] to be a powerful test and an excellent substitute for the t-test. Use of the test requires that the research worker enter a 'z' table for significance levels.

The data were easily ranked and the data fulfilled all of the other requirements necessary for use of the test, such as having an underlying continuity. The two-tailed test of significance was used since no prediction of significance had been made. The .01, .05 and .10 levels of significance were considered appropriate since these were the levels of significance used for the hypotheses of this study.

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[113] N. M. Downie and R. W. Heath, *Basic Statistical Methods* (New York: Harper & Row, 1959), Chapter 18; S. Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill, 1956); M. W. Tate and R. C. Clelland, *Non-Parametric Statistics and Short-Cut Statistics* (Danville, Illinois: Interstate Printers, 1957).

[114] Siegel, *op. cit.*

The final aspect to be dealt with concerns the biographical data collected about the APT members in the districts participating in the study. The researcher's primary interest was in determining whether any significant differences could be found to exist between the administrative performance teams of innovative districts and the administrative performance teams of non-innovative districts. The biographical factors considered were: (1) mean chronological age of APT's, (2) mean years of experience in the education profession, (3) mean years of experience in the present district's central office. The APT members in innovative districts were compared as a group to the APT members in non-innovative districts.

These data will be presented in tabular form in Chapter IV and will be shown as frequency distributions within the several categories. In addition to presenting the frequency distributions in tabular form, the researcher calculated "t's" on the mean scores of the two groups in each of the three biographical items to be considered to determine if any significant differences appeared between innovative and non-innovative districts. The results of these t-tests of the means are also shown in Chapter IV.

Summary

Chapter III has dealt with the methodology and design of the research. The manner in which the districts included in the study were selected is outlined. A description of the data collection process is included in the study and the means by which the hypotheses are to be tested is described. The chapter concludes with a statement of several other of aspects to be briefly explored as adjuncts to the main body of the research and as a means of providing additional worthwhile data for future research.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is divided into three parts. The first part is devoted to the presentation and analysis of the data collected to test the four hypotheses of the study. The second part reports the results of the test of reliability conducted with respect to the Organizational Climate Descriptive Questionnaire used in the collection of data to test the hypotheses. The final part of the chapter is devoted to a presentation and analysis of relevant collected data, which, while not a part of the major intent of the research, add to the general body of knowledge accumulating on the subject of innovation in education.

The Data Related to the First Hypothesis

The first hypothesis states:

> Highly innovative school districts' administrative performance teams will evidence a climate which can be described as more "open" than will non-innovative school district administrative performance teams.

Here the researcher was to compare the organizational climates of the innovative and non-innovative districts in this study to the open and closed profiles developed by Halpin and Croft. In order to have a basis for comparison, it was necessary to double standardize the mean score of each subtest for each district. This procedure was described in Chapter III and involves standardizing both normatively and ipsatively. The double standardized scores are presented in Table 5.[115]

A mean of these standardized scores for the innovative districts was obtained for each subtest and means similarly obtained for the non-innovative districts. The standardized scores form the profiles of the innovative and non-innovative groups. These profiles are shown in Table 6.

The next step involved calculating similarity scores comparing both innovative and non-innovative standardized profiles to Halpin and Croft's prototypic open and closed profiles. These similarity scores are presented in Table 7. The reader is reminded that if a lower similarity score is obtained by comparing a district profile to Halpin and Croft's open profile than by comparing it to the closed profile, then that profile is considered open. The reverse is, of course, also true. Chapter III contains a more complete description of this process.

The data presented in Table 7 reveal that the first hypothesis did hold. That is, the innovative school districts as a group do evidence an organizational climate profile which can be described as more open than the non-innovative school districts. Table 8 indicates the Halpin

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[115] The raw means are presented in tabular form in Appendix D.

TABLE 5

STANDARD SCORES (PROFILES) FOR EACH OF THE 24 DISTRICTS ON EACH SUBTEST OF THE OCDQ[a]

District	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
001[b]. . . .	29	57	57	52	47	59	59	41
002	41	42	52	71	41	59	43	50
003	42	33	51	55	44	67	59	49
004	49	72	59	43	51	42	40	44
005	36	64	58	63	43	43	50	42
006	38	38	55	50	38	60	57	64
007	39	58	53	29	55	52	52	62
008	54	46	47	40	73	46	54	40
009	35	62	49	67	41	46	47	53
010	46	35	72	56	46	47	51	46
012	49	44	57	33	66	57	53	40
101	55	50	39	51	73	47	43	41
102	45	47	63	34	58	40	63	49
103	48	36	40	43	56	70	57	49
104	65	38	41	50	39	57	47	63
105	69	54	46	51	57	48	35	40
106	34	38	62	56	40	54	55	59
107	52	70	45	55	37	37	55	47
108	57	29	47	51	41	54	62	59
109	72	54	40	40	56	47	41	49
110	67	54	38	60	47	47	34	52
111	53	41	39	40	50	65	46	65
112	49	62	52	54	32	36	61	55
113	45	45	40	44	73	52	44	58

[a] These numbers represent scores standardized both normatively and ipsatively, with a mean of 50 and a standard deviation of 10.

[b] Innovative district code numbers begin with zero; non-innovative prefix is one.

TABLE 6

MEAN STANDARD SCORES (PROFILES) FOR THE INNOVATIVE DISTRICTS AS A GROUP AND FOR THE NON-INNOVATIVE DISTRICTS ON EACH OF THE EIGHT SUBTESTS OF THE OCDQ[a]

	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Innovative	42	50	56	51	50	53	51	48
Non-Innovative	55	48	46	48	51	50	49	53

[a] These numbers represent scores standardized both normatively and ipsatively, with a mean of 50 and a standard deviation of 10.

TABLE 7

SIMILARITY SCORES FOR THE INNOVATIVE AND NON-INNOVATIVE DISTRICTS COMPARED TO HALPIN AND CROFT'S (H.C.) OPEN AND CLOSED PROFILES

	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration	Sum	Tendency
Innovative H.C. Open	1	7	7	1	8	10	10	7	51	Open
Innovative H.C. Closed	20	3	18	3	5	1	10	4	64	
Non-Innovative H.C. Open	12	5	17	2	9	7	12	2	66	
Non-Innovative H.C. Closed	7	5	8	6	4	4	8	9	51	Closed

and Croft prototypic profile scores[116] used in the development of the similarity scores.

TABLE 8

HALPIN AND CROFT'S PROTOTYPIC PROFILE SCORES

	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Open	43	43	63	50	42	43	61	55
Closed	62	53	38	54	55	54	41	44

In Chapter III, the researcher proposed to take this analysis one step further in an effort to discover any atypical districts that might exist within the innovative and non-innovative districts.

This step involved calculating similarity scores for each district in the effort to determine if exceptions to the general finding that innovative districts were "more open" and non-innovative districts were "more closed." These similarity scores developed by comparing each district's profile to the prototypic profiles are presented in Tables 9 and 10.

The data presented in Table 9 reveal that only two of the eleven innovative districts proved to be exceptions by evidencing similarity scores indicating a tendency toward a closed climate. However, it is pointed out that the spread between the open and closed similarity scores for both of these districts is not large.

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[116] Halpin and Croft, op. cit., p. 59.

TABLE 9

SIMILARITY SCORES OF EACH INNOVATIVE DISTRICT COMPARED TO PROTOTYPIC OPEN AND CLOSED CLIMATES

District	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration	Sum	Tendency
001/open	14	14	6	2	5	16	2	14	73	Open
001/closed	33	4	19	2	8	5	18	3	92	
002/open	2	1	11	21	1	16	18	5	75	Open
002/closed	21	11	14	17	14	5	2	6	100	
003/open	1	10	12	5	2	23	2	6	61	Open
003/closed	20	20	13	4	11	13	18	5	104	
004/open	6	29	4	7	9	1	21	11	88	Closed
004/closed	13	19	21	11	4	12	1	0	81	
005/open	7	21	5	13	1	0	11	13	71	Open
005/closed	26	11	20	9	12	11	9	2	100	
006/open	5	5	8	0	4	17	4	9	52	Open
006/closed	24	15	17	4	17	6	16	20	119	
007/open	4	15	10	21	13	9	9	7	88	Open
007/closed	23	5	15	25	0	2	11	18	99	
008/open	11	3	16	10	31	3	7	15	96	Closed
008/closed	8	7	9	14	18	8	13	4	81	
009/open	8	19	14	17	1	3	14	2	78	Open
009/closed	27	9	11	13	14	8	6	9	97	
010/open	3	8	9	6	4	4	10	9	53	Open
010/closed	16	18	24	2	9	7	20	2	98	
012/open	6	1	6	17	24	14	8	15	91	Open
012/closed	13	9	19	21	11	3	12	4	92	

TABLE 10

SIMILARITY SCORES OF EACH NON-INNOVATIVE DISTRICT COMPARED TO PROTOTYPIC OPEN AND CLOSED CLIMATES

District	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration	Sum	Tendency
101/open	12	7	24	1	31	4	18	14	111	Closed
101/closed . . .	7	3	1	3	18	7	2	3	44	
102/open	2	4	0	16	16	3	2	6	49	Open
102/closed . . .	17	6	25	20	3	14	22	5	112	
103/open	5	7	23	7	14	27	4	6	93	Closed
103/closed . . .	14	17	2	11	1	16	16	5	82	
104/open	22	5	22	0	3	14	14	8	88	Closed
104/closed . . .	3	15	3	4	16	3	6	19	69	
105/open	26	11	17	1	15	5	26	15	116	Closed
105/closed . . .	7	1	8	3	2	6	6	4	37	
106/open	9	5	1	6	2	9	6	4	42	Open
106/closed . . .	28	15	24	2	15	0	14	15	113	
107/open	9	27	18	5	5	6	6	8	84	Open
107/closed . . .	10	17	7	1	18	17	14	3	87	
108/open	14	14	16	1	1	11	1	4	62	Open
108/closed . . .	5	24	9	3	14	0	21	15	91	
109/open	29	11	23	10	14	4	20	6	117	Closed
109/closed . . .	10	1	2	14	1	7	0	5	40	
110/open	24	11	25	10	5	4	27	3	109	Closed
110/closed . . .	5	1	0	6	8	7	7	8	42	
111/open	10	2	24	10	8	22	15	10	101	Closed
111/closed . . .	9	12	1	14	5	11	5	21	78	
112/open	6	19	11	4	10	7	0	0	57	Open
112/closed . . .	13	9	14	0	23	18	20	11	108	
113/open	2	2	23	6	31	9	17	3	93	Closed
113/closed . . .	17	8	2	10	18	2	3	14	74	

Examination of the data presented in Table 10 relative to the non-innovative districts' similarity scores indicates an apparent anomaly. While non-innovative districts as a group were found to tend toward closedness (Table 7), five

of the thirteen districts in this group evidenced a climate more similar to open than closed. That is, they had a much lower similarity score when compared to the prototypic profile for open and closed climates.

Further analysis of the data concerning these atypical districts revealed that all of them tended toward the open climate on the element "Thrust." This finding would seem to indicate that these districts may be non-innovative in spite of the fact that the superintendent "worked hard," i.e., exhibited high "thrust." Thrust has been defined as (Chapter I):

> . . . behavior by the superintendent which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the superintendent's attempt to motivate the staff through the example which he personally sets. Apparently, because he does not ask staff to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the staff.

It must be noted, however, that the similarity score obtained on "thrust" was not in and of itself enough to cause any of the atypical districts to tend to the open climate. It simply was the one low similarity score that each held in common with the others.

Thus, while the first hypothesis held and innovative districts as a group were shown to be more open than non-innovative districts as a group, a few of the districts were not typical of their group. Possible explanations for this atypicalness will be further developed in Chapter V.

The Data Related to Hypotheses 2, 3, and 4

In order to test these hypotheses, it was necessary to obtain a mean of the eleven innovative districts' raw means and a mean of the thirteen non-innovative districts' raw means. (The raw means are shown in Appendix C.) Following this, a t-test was performed to determine if any significant differences appeared between the means of the innovative districts and the non-innovative districts. It will be remembered that significance was to be tested at the 1 percent, 5 percent, and 10 percent levels of significance. These data are presented in Table 11.

The data related to the second hypothesis

The second hypothesis states:

> Significant differences between highly innovative and non-innovative school districts will be shown to exist in elements of organizational climate associated with the group behavior characteristics.
>
> Corollary 1. Highly innovative districts will be significantly less "disengaged" than will non-innovative districts.
>
> Corollary 2. Highly innovative districts will reflect a significantly lower "hindrance" than will non-innovative districts.
>
> Corollary 3. Highly innovative districts will exhibit a significantly higher "esprit" than will non-innovative districts.

The data in Table 11 show that in the element "Disengagement" of the Group Behavior dimension, the first corollary relating to this dimension did hold . That is, innovative districts did exhibit a significantly lower disengagement than did non-innovative districts. This difference was significant at the .05 level of confidence.

TABLE 11
COMPARISON OF THE MEAN SCORES FOR THE INNOVATIVE GROUP OF DISTRICTS TO THE MEAN SCORES OF THE NON-INNOVATIVE GROUP ON EACH SUBTEST OF THE OCDQ

	Innovative Districts'		Non-Innovative Districts'		
Subtest	Mean	S.D.	Mean	S.D.	t[a]
Disengagement	1.396	.0949	1.560	.1955	2.423[b]
Hindrance	1.806	.2785	1.686	.2109	1.148
Esprit	3.549	.1567	3.261	.2082	3.617[c]
Intimacy	2.478	.2299	2.367	.1695	1.297
Aloofness	2.190	.1689	2.181	.2537	.095
Production Emphasis	2.356	.2665	2.242	.2768	.981
Thrust	3.360	.1920	3.203	.2991	1.435[d]
Consideration	2.783	.3098	2.760	.3192	.173

[a] A 2-tailed t-test was used for the hypothesis relating to "Intimacy" since this hypothesis was stated in the null form. This test requires a higher t value and would have to show 1.717 to be significant at the 10% level, whereas a one-tailed test, as used for testing hypotheses 2 and 4 which predict a direction, requires a t of 1.321 to be significant at the 10% level.

[b] Significant at .05 level.

[c] Significant at .01 level.

[d] Significant at .10 level.

Disengagement has been defined in Chapter I as:

> . . . the group members' tendency to "not be with it." The dimension describes a group which is "going through the motions," a group that is not "in gear" with respect to the task at hand. In short, this subtest focuses upon an APT member's behavior in a task-oriented situation.

The second corollary of Hypothesis Two dealt with the element "Hindrance." No significant difference was found between innovative and non-innovative districts in this element. Thus, Corollary Two of this hypothesis does not hold.

In Corollary Three of the second hypothesis, it was stated that significant differences would be obtained in the element "Esprit." This element proved to be highly differentiating, revealing a significant difference between innovative and non-innovative districts at the .01 level of confidence. Innovative districts were found to exhibit a significantly greater esprit than non-innovative districts.

Esprit is defined in Chapter I as:

> . . . refers to "morale." Members feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

Thus, two of the corollaries in the second hypothesis held. "Disengagement" was shown to be significant at the .05 level of significance; "Esprit" was significant at the .01 level of significance. No significant difference was found in the element "Hindrance."

Since direction was predicted, significance was tested with a one-tailed t-test of the means as described in Chapter III.

The data related to the third hypothesis

Hypothesis Three states:

> No significant differences will be shown to exist between highly innovative and non-innovative

districts in the "Intimacy" dimension of group behavior characteristics.

The data presented in Table 11 show that this hypothesis held. Innovative districts and non-innovative districts did not exhibit a significantly different degree of "Intimacy."

The data related to the fourth hypothesis

The fourth hypothesis states:

> Significant differences between highly innovative and non-innovative school districts will be shown to exist in the elements of organizational climate associated with superintendent's behavior characteristics.
>
> Corollary 1. In highly innovative school districts, superintendent's behavior will reflect a significantly lower "aloofness" than will superintendent's behavior in non-innovative districts.
>
> Corollary 2. In highly innovative school districts, superintendent's behavior will reflect a significantly lower "production emphasis" than will superintendent's behavior in non-innovative districts.
>
> Corollary 3. In highly innovative districts, superintendent's behavior will reflect a significantly higher "thrust" than will superintendent's behavior in non-innovative districts.
>
> Corollary 4. In highly innovative school districts, superintendent's behavior will reflect a significantly higher "consideration" than will superintendent's behavior in non-innovative districts.

The data presented in Table 11 show that in the element "Aloofness," no significant difference between innovative school districts and non-innovative school districts was obtained. This corollary thus does not hold.

Corollary Two deals with the element "Production Emphasis." As in the first corollary, the presented data reveal that no significant differences exist between innovative and non-innovative districts. This corollary does not hold.

The third corollary of Hypothesis Four stated that superintendents in innovative school districts would evidence a significantly higher "thrust." This element proved to be differentiating, with the third corollary holding as significant at the .10 level.

"Thrust" is defined in Chapter I as:

> . . . behavior by the superintendent which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the superintendent's attempt to motivate the staff through the example which he personally sets. Apparently, because he does not ask staff to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the staff.

The final corollary deals with the element "Consideration." In this corollary, as in the first two corollaries of the hypothesis relating to the Superintendent's Behavior dimension, no significant differences were revealed. Thus, the fourth corollary does not hold.

It was found then that three of the four corollaries in the fourth hypothesis failed to hold. The only corollary that proved significant related to the element

"Thrust." This difference was significant at the .10 level of significance.

The Reliability Study

The researcher was concerned with whether or not the Organizational Climate Descriptive Questionnaire would prove a reliable way of describing "what exists" in the central office of school districts. It will be remembered that the climate of the organization is determined from the individual administrative performance team member's perceptions of the "way things are."

To determine this, the current researcher employed one of the methods utilized by Halpin and Croft in their original study with the OCDQ. This method involved correlating the responses to the items on the questionnaire of the even-numbered APT members with the responses of the odd-numbered APT members in each district, subtest by subtest, across the eleven innovative districts. Similarly, a correlation coefficient was obtained for the non-innovative districts.

The data from the reliability study are shown in Table 12.

These data reveal a low reliability coefficient on each of the eight subtests indicating that separate items within subtests received varying responses from individual APT members. Innovative districts do reveal a higher coefficient of reliability on the three elements (subtests) from which significant differences were obtained between innovative and non-innovative districts. In the elements "Disengagement," "Esprit," and "Thurst" innovative districts evidence coefficients of .25, .18, and .32 respectively.

TABLE 12

COMPARISON OF THE RELIABILITY COEFFICIENTS[a] OF THE INNOVATIVE DISTRICTS TO THOSE OF NON-INNOVATIVE DISTRICTS FOR EACH SUBTEST OF THE OCDQ

Subtest	Innovative	Non-Innovative
Disengagement	.25	-.09
Hindrance	.09	.05
Esprit	.18	-.21
Intimacy	.08	-.30
Allofness	-.04	.30
Production Emphasis	.04	.32
Thrust	.32	.28
Consideration	.01	.13

[a] These reliability coefficients were obtained by the odd-even method of computing reliability described in Chapter III.

The finding of generally low reliability coefficients suggests to the researcher that APT members in the districts in the two samples do not perceive separate items in the elements composing the climate as a group, but rather see things as individuals--and differently--than other members of the central office staff. The implications of, and possible reasons for, this are explored in Chapter V.

The current researcher used the odd-even method of determining reliability because he was mainly interested in getting a measure of the groups' perception since he was applying the instrument in a different locus from that in which it had been originally developed. The OCDQ as an instrument has been established as reliable by Halpin and Croft[117] through use of the split-half method (Table 13). They also conducted a study of reliability in which individual group member's perceptions were considered.

TABLE 13

HALPIN AND CROFT RELIABILITY COEFFICIENTS

OCDQ Subtests	Odd-Even Respondents	Split-Half Coefficient Reliability
Disengagement	.59	.73
Hindrance	.54	.68
Esprit	.61	.75
Intimacy	.49	.60
Aloofness	.76	.26
Production Emphasis	.73	.55
Thrust	.75	.84
Consideration	.63	.59

The current researcher did not use the split-half method of computing reliability. It will be remembered that as the OCDQ was adapted by him for use with central office personnel, nine items were deemed inapplicable and were dropped. This resulted in only five items each for the subtests, "Hindrance" and "Production Emphasis." Statisticans with whom the matter was discussed agreed that in order for the split-half method to be employed, a minimum of six items need to be included to provide a meaningful correlation.

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[117] Halpin and Croft, op. cit., p. 49.

The current researcher's study dealt with professional central office staff and their superintendent in school districts rather than in an individual school staff-principal situation. The low reliability coefficients obtained from the current study when compared with those obtained by Halpin and Croft present a situation of some interest.

The current researcher's findings of significant differences between innovative and non-innovative districts as a group imply that there are indeed differences on certain elements of the OCDQ between these districts. However, personnel within each district's central office apparently have enough diversity of perception that a low reliability coefficient results in each subtest.

Teachers in individual schools, as revealed in the Halpin and Croft study, as well as in the later even more comprehensive study by Brown,[118] appear to perceive "things," i.e., what is actually going on around them, more in line with their colleagues in the same building than do individual APT members in the current study perceive "what is" in agreement with their fellow team members. There is, it would seem, more congruence of perception among the teachers.

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[118] Brown, op. cit.

Halpin and Croft, when discussing the issue of "what is," presented the following narrative as an illustration. It is especially appropriate here.

> Obviously, answers to questions of the type that we have used in the OCDQ provide not measures of "fact," but measures of perception, and in this respect, indices of attitudes. When you ask teachers to describe the climate of their school, what you get in response is, of course, a description of the school according to the perception of each respondent. If Miss Ann Thrope, in the fourth grade, describes her principal as inconsiderate and tyrannical while Miss Polly Annah describes him as extremely considerate and thoughtful, one is tempted to ask, "But really, which is he?" This is an unanswerable question, for he can be said to be either, neither or both. For our purposes, we have chosen to say that he "is." Yet we know that this "is-ness" must always be defined in respect to a specified reference group.
>
> Miss Thrope's perception of him influences the way she behaves toward him, and in like manner, Miss Annah's perception determines the way in which she behaves toward him. Hence we are confronted by the perennial phenomenological dilemma; each person is limited to seeing the world through only his own perceptions.[119]

The implications of the reliability study are more fully explored in Chapter V.

Other Aspects of the Study

With the performance of the correlation study, the essence of this research is complete. Other data were readily available to the research worker, however, which if they are not directly applicable to the research as designed, did provide some additional information and perhaps some additional insights into the subject matter of the current research. Innovation in the school setting has been the subject of other research effort. Chapters I and II of the current research study cite several of these studies. The other aspects of the current study attempt to serve the purpose of providing additional data relative to the general subject of innovation in the field of education.

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[119] Halpin and Croft, op. cit., p. 19.

The presentation and analysis of data in the final section of Chapter IV is divided into two parts with respect to the kinds of data presented. The first part is concerned with reporting findings relative to salient features of the school districts included in the two samples of the study. The researcher has collected data for each district in such areas as: (1) the average daily membership of pupils (ADM), (2) the assessed valuation per pupil, (3) the expenditure per pupil, (4) the percent of expenditure per pupil that was spent for instruction, and (5) the current (1963-64) school tax rate. Significant differences between innovative and non-innovative districts are tested through the use of the Mann Whitney U-test as described in Chapter III. It will be remembered that this test requires entering a z table rather than the t table used in testing the hypotheses that formed the main body of the research. Significance is tested at the .01, .05 and .10 levels.

The second part of this section is concerned with the biographical data collected relative to the individual APT members in each district. These data receive a statistical treatment with significant differences tested between innovative and non-innovative districts.

The data relative to characteristics of the districts

The average daily membership (ADM) of innovative school districts was compared to the ADM of non-innovative school districts. These data are presented in Table 14. Examination of the data presented in this table indicates that the districts do not significantly differ on this aspect. Innovative districts were higher but not significantly so. Student population of the school district thus did not appear as related to innovativeness or non-innovativeness.

In the comparison of assessed valuation per pupil between innovative districts and non-innovative districts presented in Table 15, no significant differences were obtained. A 'z' score of .319 was obtained; to be significant at the .10 level of significance, a score of 1.645 must be obtained. Thus, innovative districts are not revealed to have any greater source of wealth per pupil than non-innovative districts.

TABLE 14

COMPARISON OF THE AVERAGE DAILY MEMBERSHIP IN INNOVATIVE DISTRICTS TO THE NON-INNOVATIVE DISTRICTS

Innovative		Non-Innovative	
ADM	Rank	ADM	Rank
88,320	24	53,920	23
20,779	21	25,358	22
12,298	20	11,087	18
12,224	19	10,953	17
7,942	16	5,837	13
7,216	15	5,272	11
5,913	14	4,297	9
5,970	12	3,148	7
5,263	10	2,949	6
3,444	8	2,366	4
2,905	5	2,182	3
		1,775	2
		1,496	1
R_1 =	$164^{a,b}$	R_2 =	136
ER_1 =	137.5	ER_2 =	162.5

'z' = 1.537^{c}

---

[a] Where R_1 is the total rank for innovative districts.
Where ER_1 is the expected rank for innovative districts.
Where R_2 is the total rank for non-innovative districts.
Where ER_2 is the expected rank for non-innovative districts.

[b] When the "R" is greater than the "ER," the direction of the difference is shown.

[c] Significance levels = 1.645 at the .10 level.
1.960 at the .05 level.
2.575 at the .01 level.

TABLE 15

COMPARISON OF THE ASSESSED VALUATION PER PUPIL IN INNOVATIVE DISTRICTS TO NON-INNOVATIVE DISTRICTS

Innovative Val./Pupil	Rank	Non-Innovative Val./Pupil	Rank
$34,763	23	$39,827	24
27,290	22	25,881	21
23,847	20	19,942	18
21,403	19	18,528	16
19,092	17	17,293	15
16,287	14	15,712	13
14,438	9	15,618	12
13,530	8	15,335	11
13,003	7	14,508	10
10,789	3	12,958	6
5,584	1	12,780	5
	$R_1 = 143^{a,b}$	12,109	4
	$ER_1 = 137.5$	9,735	2
			$R_2 = 157$
			$ER_2 = 162.5$

'z' = .319[c]

---

[a] Where R_1 is the total rank for innovative districts.
Where ER_1 is the expected rank for innovative districtw.
Where R_2 is the total rank for non-innovative districts.
Where ER_2 is the expected rank for non-innovative districts.

[b] When the "R" is greater than the "ER," the direction of the difference is shown.

[c] Significance levels = 1.645 at the .10 level.
1.960 at the .05 level.
2.575 at the .01 level.

The third aspect under consideration was a comparison of innovative and non-innovative districts relative to the total expenditures of the districts per pupil in average daily membership. The data presented in Table 16 reveal that the innovative school districts did spend significantly more money per pupil than did non-innovative school districts. This was significant at the .10 level.

A comparison was made in the fourth aspect of the percent of the total expenditures per pupil spent for instruction between innovative districts and non-innovative districts. These data are presented in Table 17. No significant differences were obtained from these data.

The final salient characteristic of the districts studied was the school tax rate. In Table 18 the presented data reveal no significant differences existing between the innovative and non-innovative districts in the study. Neither type of district is making a significantly greater tax effort than the other.

Thus, in these first four aspects studied, in only one (total expenditures per pupil) was there a significant difference. Innovative districts were found to expend significantly more money per pupil than did non-innovative districts. This was shown as significant at the .10 level of significance. There were no significant differences revealed in average daily membership, assessed valuation per pupil (wealth), percent of total expenditures per pupil for instruction, or in the school tax rate.

TABLE 16

COMPARISON OF THE TOTAL EXPENDITURE PER PUPIL OF INNOVATIVE DISTRICTS TO NON-INNOVATIVE DISTRICTS

Innovative		Non-Innovative	
Cost/Pupil	Rank	Cost/Pupil	Rank
$768.99	24	$592.58	23
589.54	22	468.04	19
587.29	21	457.86	17
552.19	20	451.72	16
463.31	18	425.47	12
446.69	15	419.15	11
440.10	14	418.15	10
433.46	13	396.96	7
415.12	9	390.22	6
414.92	8	377.41	5
339.25	2	358.21	4
R_1 =	166[a,b]	355.27	3
ER_1 =	137.5	305.01	1
		R_2 =	134
		ER_2 =	162.5

'z' = 1.653[c]

---

[a] Where R_1 is the total rank for innovative districts.
Where ER_1 is the expected rank for innovative districts.
Where R_2 is the total rank for non-innovative districts.
Where ER_2 is the expected rank for non-innovative districts.

[b] When the "R" is greater than the "ER," the direction of the difference is shown.

[c] Significance levels = 1.645 at the .10 level.
1.960 at the .05 level.
2.575 at the .01 level.

TABLE 17

COMPARISON OF THE PERCENT OF THE TOTAL EXPENDITURE PER PUPIL SPENT FOR INSTRUCTION (I.C.) IN INNOVATIVE DISTRICTS TO NON-INNOVATIVE DISTRICTS

Innovative		Non-Innovative	
% for I.C.	Rank	% for I.C.	Rank
72.7	21	74.6	24
71.6	19	74.4	23
70.2	14.5	73.6	22
70.2	14.5	72.0	20
69.6	12	71.4	18
69.5	11	71.0	17
68.7	6.5	70.3	16
68.2	5	69.9	13
67.4	3	69.1	9.5
67.1	2	69.1	9.5
67.0	1	69.0	8
R_1 =	109.5[a,b]	68.7	6.5
ER_1 =	137.5	67.7	4
		R_2 =	190.5
		ER_2 =	162.5

'z' = 1.624[c]

---

[a] Where R_1 is the total rank for innovative districts.
Where ER_1 is the expected rank for innovative districts.
Where R_2 is the total rank for non-innovative districts.
Where ER_2 is the expected rank for non-innovative districts.

[b] When the "R" is greater than the "ER," the direction of the difference is shown.

[c] Significance levels = 1.645 at the .10 level.
1.960 at the .05 level.
2.575 at the .01 level.

TABLE 18

COMPARISON OF THE TOTAL SCHOOL TAX RATE OF THE INNOVATIVE DISTRICTS TO THE NON-INNOVATIVE DISTRICTS

Innovative		Non-Innovative	
Tax Rate	Rank	Tax Rate	Rank
35.06	24	31.7	23
30.7	21	31.0	22
30.6	20	29.2	18
29.5	19	28.4	16
28.8	17	28.0	14
28.2	15	25.4	12
27.8	13	23.9	11
23.64	10	23.1	7
23.56	9	22.7	6
23.4	8	22.5	5
22.4	3.5	22.4	3.5
	R_1 = 159.5[a,b]	20.5	2
	ER_2 = 137.5	19.4	1
			R_2 = 140.5
			ER_2 = 162.5

'z' = 1.276[c]

[a] Where R_1 is the total rank for innovative districts.
Where ER_1 is the expected rank for innovative districts.
Where R_2 is the total rank for non-innovative districts.
Where ER_2 is the expected rank for non-innovative districts.

[b] When the "R" is greater than the "ER," the direction of the difference is shown.

[c] Significance levels = 1.645 at the .10 level.
1.960 at the .05 level.
2.575 at the .01 level.

The data relative to biographical characteristics of APT members

The final aspect dealt with in this research concerned an examination of certain biographical data collected relative to APT members in the districts. The biographical data examined are: (1) the mean age of APT members, (2) the mean years of experience in the profession of education, (3) the mean years of experience in the present district's central office. Innovative districts as a group were compared to non-innovative districts as a group. These data are presented in Table 19 and are shown as frequency distributions.

TABLE 19

FREQUENCY DISTRIBUTIONS OF THE BIOGRAPHICAL DATA OBTAINED FROM THE OCDQ FOR THE INNOVATIVE AND NON-INNOVATIVE GROUPS OF DISTRICTS

	Innovative	Non-Innovative
Age of APT Members		
25-34 years	8	9
35-44	20	28
45-54	31	35
55-64	17	21
65+	0	3
Education Experience of APT Members		
0- 9 years	9	14
10-19	24	35
20-29	21	22
30+	22	28
Experience in Present Central Office		
0- 4 years	28	43
5- 9	24	25
10-19	23	19
20+	1	9

The researcher calculated a t-test of the means for statistical comparison of the data in each of the three biographical aspects examined. To be significant at the .10 level of significance, a t of 1.321 must be attained. These data are presented in Table 20.

TABLE 20

COMPARISON OF THE BIOGRAPHICAL DATA OF APT MEMBERS IN INNOVATIVE DISTRICTS AS A GROUP TO THOSE IN NON-INNOVATIVE DISTRICTS AS A GROUP

Factor	Innovative Mean	Innovative Std. Dev.	Non-Innovative Mean	Non-Innovative Std. Dev.	t[a]
Age	47.00	11.070	47.50	9.850	0.352
Yrs. in Educ.	20.69	8.661	19.62	9.000	0.794
Yrs. on Staff	7.66	5.427	7.88	7.089	0.229

[a] To be significant at the .10 level of significance, a t of 1.321 would have to be obtained.

Examination of the data reveals that no significant differences between the innovative districts and the non-innovative districts are found to exist in any of the three biographical aspects.

Summary

This chapter has presented and analyzed the data collected in the study. In the first section of the chapter, the data relative to the hypotheses are presented. Hypothesis One, which stated that innovative districts would evidence a climate more open than non-innovative, held.

In the second hypothesis dealing with the Group Dimension of Organizational Climate, Corollaries One and Three, predicting significant differences between innovative and non-innovative districts on "Disengagement" and "Esprit," held at the .05 and .01 levels of significance respectively. The second corollary did not hold.

The third hypothesis predicted that no significant differences would exist between the two samples in the element "Intimacy." This hypothesis held.

The fourth hypothesis referred to the dimension of superintendents' behavior and contained four corollaries. Only one corollary held. Corollary Three, which dealt with the element "Thrust," revealed a significant difference at the .10 level of significance with innovative districts' superintendents' behavior reflecting more "Thrust" than non-innovative districts' superintendents. Corollaries One, Two, and Four, dealing with the elements "Aloofness," "Production Emphasis," and "Consideration," respectively, when subjected to statistical analysis did not reveal significant differences.

Following the presentation and analysis of data relative to the hypotheses, the reliability study was reported. Generally low reliability coefficients were obtained on the eight subtests (elements) in the Organizational Climate Descriptive Questionnaire which was used in the data collection.

This reliability study was conducted to enable the researcher to obtain a measure of group's perception of "what is" and was not to determine the reliability of the instrument itself. This being so, the "odd-even" method of obtaining a reliability coefficient was used. The low reliability coefficients obtained thus indicate that staff members in central offices do not tend to see things the same. This may suggest that the use of the instrument as a single measure in a single school district central office is limited. This and other implications of the reliability study are stated more fully in Chapter V.

The chapter concludes with an examination of data unrelated to the hypotheses of the study. Data related to certain characteristics of the districts included in the study were collected and innovative and non-innovative districts were compared. Of five aspects studied, it was found that there was a significant difference at the .10 level of significance between innovative and non-innovative school districts in the amount of money expended per pupil. Innovative districts expended a significantly greater amount of money per pupil than did non-innovative districts.

The researcher also collected data relative to certain biographical characteristics of administrative performance team members in the districts. These data revealed no significant differences.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

A problem was determined to exist in the acceptance and diffusion of new ideas and practices in the field of education. This research has concerned itself with an examination of an aspect of the innovative process currently existing in the State of Ohio. The focal point of the research has been the central office in innovative and non-innovative school districts within the State. This investigation had as its primary purpose the exploration of the possible influence organizational climate or elements of organizational climate, as depicted by the central office administrative performance team in selected Ohio school districts, may have on the innovativeness of a school district.

A secondary function of the research became that of determination of the applicability of the Organizational Climate Descriptive Questionnaire as a single instrument for use with central office staff. The OCDQ, which served as the main data-gathering instrument, had been determined in several preceding studies to be a useful instrument when dealing with individual school staffs.

A third function, secondary in nature also, was to collect data unrelated to the hypotheses of the study, but relative to the districts involved in the study which would serve to extend knowledge about the innovative process and might relate to certain characteristics of school districts.

Four hypotheses were stated at the outset of the study:

1. Highly innovative school district administrative performance teams will evidence a climate which can be described as more "open" than will non-innovative school district administrative performance teams.

2. Significant differences between highly innovative and non-innovative school districts will be shown to exist in elements of organizational climate associated with the group behavior characteristics.

Corollary 1. Highly innovative districts will be significantly less "disengaged" than will non-innovative districts.

Corollary 2. Highly innovative districts will reflect a significantly lower "hindrance" than will non-innovative districts.

Corollary 3. Highly innovative districts will exhibit a significantly higher "esprit" than will non-innovative districts.

3. No significant differences will be shown to exist between highly innovative and non-innovative districts in the "intimacy" element of group behavior characteristics.

4. Significant differences between highly innovative and non-innovative school districts will be shown to exist in the elements of organizational climate associated with superintendent's behavior characteristics.

Corollary 1. In highly innovative school districts, superintendent's behavior will reflect a significantly lower "aloofness" than will superintendent's behavior in non-innovative districts.

Corollary 2. In highly innovative school districts, superintendent's behavior will reflect a significantly lower "production emphasis" than will superintendent's behavior in non-innovative districts.

Corollary 3. In highly innovative school districts, superintendent's behavior will reflect a significantly higher "thrust" than will superintendent's behavior in non-innovative districts.

Corollary 4. In highly innovative school districts, superintendent's behavior will reflect a significantly higher "consideration" than will superintendent's behavior in non-innovative districts.

This final chapter of the study has three purposes: (1) to summarize the major findings, (2) to draw conclusions that seem evident from the findings, and (3) to state the implications of the study to the field of education.

Summary

Sources of the data

The 313 school districts which participated in the 1964 Ohio Innovations Survey served as the population from which the samples were drawn. From this population, there were obtained the thirteen non-innovative districts and the eleven innovative districts from which data were secured.

To the central office administrative performance team members of each of these twenty-four school districts was administered the Organizational Climate Descriptive Questionnaire. The instrument was administered personally by the researcher to the APT members in each district at one sitting during late Spring in 1965.

Treatment of the data

The data relative to the hypotheses were treated in two different ways. Since the first hypothesis deals with climate in a manner which can be called global and does not predict a significant difference, the data were handled mathematically rather than statistically. Through the use of similarity scores, the research worker was able to test his first hypothesis.

The second, third, and fourth hypotheses were tested statistically through the application of a t-test of the means. Since the third hypothesis was stated in the null form, a two-tailed test was used rather than the one-tailed t-test that was applied in the second and fourth hypotheses which did predict a significant difference.

In the effort to gain insight about the applicability of the Organizational Climate Descriptive Questionnaire to the central office of school districts, an odd-even correlation study was conducted as described in Chapter III. This correlation study does not measure the reliability of the instrument but rather measures the agreement of the perceptions staff members have about the characteristics of their particular central office. Since the climate is what is reflected by the group's perceptions, this step was taken to indicate the degree to which a climate could be discerned in any one particular district through the singular use of the OCDQ.

The other aspects of the study involved collecting pertinent data relative to such characteristics of the districts in the study as the average daily membership of pupils, the assessed valuation per pupil, the expenditure per pupil, the total expenditure per pupil that was spent for instruction, and the current tax rate in the district. The comparison between innovative districts and non-innovative districts was treated statistically through the use of the Mann-Whitney U test. These data provided additional information about the relevance of the five factors to innovativeness.

Further, the researcher had available biographic data about each APT member in each of the districts in the study. These data were also analyzed to see if there was revealed any important information about personal characteristics of central office staff members and possible relation to innovation in school districts.

Findings

The findings are summarized and reported as they relate to the stated hypotheses. A summary of the reliability study is reported immediately after the major findings of the research. Following the reliability study, the remaining secondary findings are summarized.

The first hypothesis.--The first hypothesis predicts that innovative school districts will evidence a more open climate than non-innovative school districts. In order to test this hypothesis, the standardized mean score of the innovative districts and the non-innovative districts on each of the subtests was compared to the prototypic scores for open and closed climates as developed by Halpin and Croft. A similarity score was thus obtained.

It was found that innovative districts were more similar to the open climate than the closed. Conversely, although not predicted, non-innovative districts were more similar to the closed climate. The hypothesis, thus, holds. Innovative districts did evidence a climate which could be described as more open than did non-innovative districts.

The second hypothesis.--In the second hypothesis, significant differences were predicted between innovative and non-innovative districts in the elements of group behavior labeled "Disengagement," "Hindrance," and "Esprit." It was prediced that innovative districts would exhibit significantly less disengagement, lower hindrance, and a significantly higher esprit than their non-innovative counterparts. Significance was tested by a t-test of the means at the .01, .05, and .10 levels.

Two of these corollaries held. Innovative districts were found to be significantly less disengaged. This corollary held at the .05 level of significance. Innovative school districts were also found to evidence a significantly higher esprit than non-innovative school districts. This corollary held at the .01 level of significance. No significant difference was obtained in the element "Hindrance."

The third hypothesis.--The third hypothesis of this study dealt with the fourth element of the group behavior dimension labeled "Intimacy." This hypothesis predicted that no significant difference between innovative and non-innovative districts would be obtained. The test of significance was again a t-test but since no direction of significance was predicted, a two-tailed t-test was employed rather than the one-tailed t-test utilized in testing the second and fourth hypotheses.

This hypothesis held. No significant differences were obtained.

The fourth hypothesis.--The fourth hypothesis relates to the entire dimension of superintendent's behavior. Significant differences were predicted in all four elements of this dimension. Superintendents in innovative districts were predicted to evidence significantly lower aloofness, lower production emphasis, higher thrust, and higher consideration than superintendents in non-innovative districts.

One of these corollaries held. Superintendents in innovative school districts did evidence a significantly higher thrust. This corollary held at the .10 level of significance.

Reliability study

The reliability study conducted as described in Chapter III was to enable the research worker to obtain a measure of a group's perception of "what is."

Generally low reliability coefficients were obtained. This has some implication to the use of the OCDQ with central office staffs as a single instrument in determining an organizational climate per se as existing in any particular central office. This is further discussed later in this chapter.

Other aspects of the study

Additional data were gathered relative to the school districts involved in the major emphasis of this research which, while not directly related to the research effort as designed, did provide additional information about the general subject matter of the research. These other aspects of the current study hopefully will serve the function of providing further insight into the general subject of innovation in the field of education.

Data were collected about the average daily membership of pupils, the assessed valuation per pupil, the expenditure per pupil, the percent of expenditure per pupil that was spent for instruction, and the current (1963-64) school tax rate for innovative and non-innovative districts.

Another aspect which was investigated involved data relative to certain biographical characteristics of the administrative performance team members.

Data relative to characteristics of the school districts.--The five aspects examined relative to characteristics of the innovative and non-innovative districts were statistically tested for significant differences. One characteristic was found to be significantly different when innovative districts were compared to non-innovative districts. Innovative districts were found to expend a significantly greater amount of money per pupil than did non-innovative districts. This difference was significant at the .10 level.

Data relative to biographical characteristics of APT members.--Biographical characteristics studed included: (1) mean chronological age of APT members, (2) mean years of experience in the education profession, and (3) mean years of experience in the present school district's central office. No significant differences were revealed to exist between innovative and non-innovative districts in these three factors.

Conclusions

After consideration of the findings from the study, several conclusions can be stated.

1. Innovative school districts as a group do tend to exhibit a more "open" organizational climate and conversely, non-innovative school districts exhibit a more "closed" climate as measured by the Organizational Climate Descriptive Questionnaire. It can be concluded then since a certain internal organizational feature (open climate) has been shown to appear more often in school districts identified as innovative and less often in school districts identified as non-innovative, that another dimension to the process of innovation in school districts exists. This dimension has been labeled "central office organizational climate" in the current research.

2. However, when the participating districts' organizational climates are analyzed separately, several exceptions evidence themselves. For example, five of the non-innovative districts produced an "open" organizational climate and two of the innovative evidenced a "closed" climate. Thus, the researcher would further conclude that the OCDQ as presently constructed, although it appears to be a useful indicator of a potentially innovative atmosphere, does not seem to be a sufficient single comprehensive measure of the "climate for change" in a single district.

3. The data from this research indicate that three of the elements described by the OCDQ are significantly related to the innovativeness of school districts. The superintendent in innovative districts is revealed to have greater "thrust" (highly motivated and hard working). The staff in innovative districts as a whole are shown to be less "disengaged" (feel pride in achievement; are personally enthused and involved in their work) and exhibit more "esprit" (have good morale and a sense of accomplishment) than do the non-innovative administrative performance teams.

Thus, it may be concluded from the data the only certain aspects of central office organizational climate are related to innovativeness and that if these aspects occur together, the conditions in a district would appear such that at least within the central office, barriers to change may be modified.

4. The findings from this study agree with the research findings and writers as reported in Chapter II relative to the importance of personal involvement of staff in the tasks at hand as opposed to "telling what to do" by an authority figure as one of the key variables in effecting change. All three of the elements which held as significant reflect this conclusion. Further agreement with other research findings is found that "the more congruence the chief administrator is able, by his actions, to bring about between

the needs of individuals in the organization and the needs (task accomplishments) of the organization, the more likely the organization is to move toward its goal."[120] Examination of the operational definitions of the three elements which held as significant as well as of the individual items which appear within the subtests relative to these three elements will substantiate this conclusion even further.

5. One factor in the portion of the research devoted to other aspects revealed itself as significant. The total expenditure of money per pupil in the districts was found to be significantly greater in innovative districts.

This finding agrees with Kumpf's research and the conclusions reported in Ross as cited in Chapter I[121] to the extent that innovativeness appears to be related to the total expenditure per pupil. But, no evidence was found to support Kumpf, Ross, or Rogers in their findings of a high relationship between the financial resources of a school district and innovativeness. No significant differences were found in the aspect "assessed valuation per pupil" between innovative and non-innovative districts. Thus, it can be further concluded that available wealth itself is not a single determining factor of innovativeness but that willingness to *expend this wealth* for schools may be one of several impinging factors.

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[120] *Supra*, Chapter II, p. 55.

[121] *Supra*, Chapter I, p. 5.

An interesting anomaly did present itself in the study of the other aspects related to characteristics of the districts. Since per pupil expenditure was significantly related to innovativeness and assessed valuation (wealth that could be taxed) was not, one would have expected to find the current tax rate in innovative districts significantly higher. They were spending more with no more taxable wealth than non-innovative districts. This was not the case however. Innovative districts were not found to have a significantly higher tax rate. This needs further study. It could mean that innovative districts received a greater amount of State support and/or were utilizing in greater amounts federal assistance programs and thus were receiving more money in addition to that collected from local taxes.

This study does show then that more dollars expended per pupil occurs as a feature of innovative school districts. It also shows that financial resource does not appear a necessary requisite among the districts.studied. The findings indicate that while expenditure per pupil apparently has some relationship to innovativeness, other factors too appear in juxtaposition with innovativeness. The interrelationship of variables will need to be subjected to much further study.

The researcher concludes then that expenditure per pupil is related to innovativeness in school districts but that it is only one of several factors which influence innovation.

6. The generally low reliability findings result in some question about whether central office staff members perceive "what is" in a particular district as a group. The data indicate great variability of perception in the school districts within each subtest (element). This indicates that central office personnel perceive "what is" much more individualistically in regard to the organizational climate of their organization than do teachers within a single building. Thus, the current research worker's assumption that Halpin and Croft's Organizational Climate Descriptive Questionnaire would provide a good single measure of the organizational climate within a district's central office does not appear to hold true because the great variability of perception of APT members may not allow for a clearly delineated organizational climate as measured by the OCDQ. He concludes therefore that use of the OCDQ as a single instrument for the determination of individual district central office's receptivity to change remains open to question.

But, it should be remembered that even with the variability of response on separate items within the subtests, a picture of "what is" within the districts did issue and that this picture was significantly different on three elements (subtests) of organizational climate between innovative and non-innovative districts.

7. The final conclusion to be stated serves in large part as a summarization.

Some of the factors which operate within a school district to facilitate or inhibit change have been suggested by this research even though no final conclusion can be made about their relative importance to change in a district or their influence and relationship to each other or to other variables determined by previous research. It has been shown in this exploratory research that certain factors heretofore not identified do appear along with innovativeness in school districts that do not appear in districts that are not identified as innovative. Thus, as a result of this study, more is known about the behaviors and conditions which are associated with innovation, and something more can be inferred about the direction in which these behaviors and conditions should be channeled.

However, as noted, the possible interrelationships of variables that appear as related to innovativeness are not shown by this study. Whether some variables are more efficacious and by their nature more able to modify negative influences to change, cannot at this time be shown. Perhaps there is a hierarchy or ordering of variables with some quite crucial to change, others helpful in providing a receptive atmosphere but not nearly so influential.

This study has shown, for example, much as Carlsen's study[122] has shown, that wealth is not nearly as powerful a predictor of innovativeness of a district as may have been formerly thought, although the body of research that has been built up previously is such that this variable cannot be discounted. Thus, this factor may have had its relative importance overrated. Where does it stand, however, in juxtaposition with the other variables which the current research suggests and which other research is beginning to suggest? This question remains unanswered. It can be concluded that there are several factors which impinge upon the degree of innovativeness of school districts and that some of these may as yet be unidentified.

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[122] *Supra*, Chapter I, p. 7.

Thus, the researcher must further conclude that while his research may have opened the door a little farther, it raises more questions than it gives answers. The current research has been exploratory and this was its stated intent. Future researchers are faced with the continuing task of further identifying and classifying the factors which produce an environment receptive to change as well as finding the relative importance of these factors.

As previously stated, and apparent from research in other disciplines, in order for planned change to become a useful process for improving educational practices, possible change agents must be identified and utilized. The search for factors influencing change must continue if the field of education is to develop the organized attack on obsolescence which the term planned change implies.

Implications

Several implications issue from the findings of current research and the conclusions drawn from these findings. Many of these implications are in the form of questions which the research raises and all are suggestive of further research. The current researcher sees the following implications to the field of education arising out of his research.

1. No clear-cut reasons are apparent that would account for finding some districts to be atypical of the sample in which they were placed. There were "open" districts to be found in the non-innovative sample and "closed" districts to be found in the innovative sample even though the first hypothesis held.

There are probably still remaining as yet unidentified factors which affect the innovativeness of a school district. This research was exploratory and sought to identify factors residing in the organizational climate of a district central office which appeared related to innovativeness. The task of showing direct relationship of these factors to each other and to other factors affecting the innovativeness of districts, or for that matter of definitely establishing that the factors identified are directly related to innovation, remains for future research work.

Indeed, in the current researcher's opinion, it can be clearly implied that the point where generalizations can be made is not yet at hand. The greatest value of the current research may be simply that it has illustrated that the problem of providing for more innovativeness in education is far more complex than previously suggested and that there exist any number of impinging factors which influence negatively and positively the process of innovation.

For example, the central office staff in some districts may be inhibited or encouraged by a closed or open board of education. The influence of boards of education on innovativeness has not been subjected to study and yet this group is by law the policy-making body of a district. The receptivity of a board to the idea of its district adopting the new and untried may indeed affect the innovativeness of a district.

2. The element "Thrust" was shown to be significantly higher in innovative school districts as a group. However, all five of the non-innovative districts which evidenced a similarity score classifying them as tending to an "open" climate held a higher thrust score in common. This may indicate that if superintendent's "Thrust" is related to innovativeness in a district, the element alone is not of sufficient power to overcome other more change-inhibiting factors. Perhaps, however, when it appears along with the other two elements which held as significant, high "Esprit" and low "Disengagement," something positive affecting the degree of receptivity to change in a district occurs.

Again, it is pointed out that possible interrelationship of significant variables was not a part of this study, but the previous finding relative to "Thrust" does imply that there may be factors that appear related to innovation which while they may be helpful in creating a receptivity to change, are not crucial factors in and of themselves. Thus, there may be implied an ordering of factors in some kind of hierarchy or appearing in juxtaposition which influences innovativeness.

3. The findings from the reliability study may hold some implication. It will be remembered that the reliability coefficient obtained was a measure of group perception rather than a study of the reliability of the OCDQ. It measured how well individuals within a group (APT) perceived things as a group.

The low reliability coefficients obtained indicate that APT members respond differently to individual items within subtests (elements). It has already been suggested in the conclusions that this may limit the usefulness of the OCDQ as a single instrument for use in discovering the organizational climate in any one school district central office. Yet used, as it was, with several districts, the OCDQ did uncover significant differences and the researcher was able to show mathematically a relationship between innovation and "openness." It is interesting and important to speculate why the low cofficient of reliability was obtained.

At the outset, however, it is again pointed out that even with the variability of response on separate items within the subtests (elements), a picture does issue about "what is" within the districts, and that picture was significantly different on three of the elements of organizational climate when innovative districts were compared to non-innovative districts. Whether the picture obtained on the other five elements would have been clearer if the items within those subtests had received more congruent responses is not known and cannot be discerned.

It should also be noted that the highest reliability coefficients were obtained for the innovative districts on those three elements which held as significant. The elements were "Disengagement," "Esprit," and "Thrust."

Nevertheless, generally low reliability coefficients were obtained and reveal a lack of close agreement among APT members on separate subtest items. The apparent fact that individuals within the same central office did not respond similarly requires examination.

The administrative performance team in any district's central office is composed of individual specialists, with the possible exception of the superintendent. Even the superintendent in his role as a generalist is probably more expert in some aspects of the educational endeavor than in others.

Individual APT members responding from their special area of administrative or supervisory expertise might well not agree on a particular single item within a subtest depending upon the nature of the item. For example, the item dealing with whether or not the superintendent is well prepared when he speaks at school functions (Item 46, subtest "Thrust"[123]) may evince a different response from the Business and Finance Director who feels the superintendent is too superficial in his public treatment of school finance, than from the Curriculum Director who is quite satisfied that the superintendent's treatment is most complete. Each responds from his own value structure about what is of relative importance.

Other examples of the same type could be cited and the point is that there may have been enough of this kind of item, perhaps only one or two in a particular subtest, which allowed, or indeed encouraged, a response from the particular specialist's own professional frame of reference.

Teachers, on the other hand, responding essentially to the same questionnaire, applied as it originally was to their individual school and principal, are responding to one feature of the school operation only--the teacher-learner situation. Central office personnel are responding from their various positions of responsibility concerned as they are with special fragments of the whole. Individuals concerned with finance, budget-making, special curricula, general curricula, pupil personnel, transportation, professional personnel, and the many other areas of specialty that may be found in a central office of a complex school operation might indeed be expected to respond with less congruence to any one of the items within particular subtests. And, as it developed, this is apparently what happened.

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[123] See Appendix A-4.

But, while not all of the central office administrative performance team agreed that the superintendent exhibited a certain kind of behavior, or that the group reflected certain behaviors or characteristics, on any particular item within a subtest when the subtest is examined as a whole, a picture of "what exists" within a district does emerge even though it may be somewhat cloudy and incomplete. This indistinct picture did reveal that innovative districts were significantly different from non-innovative districts on three of the elements making up organizational climate.

4. The concept of openness versus closedness in organizational climate is directly related to similar concepts about the openness or closedness of an individual's personality. Both types of climates are illustrative of certain behavior patterns within the organization. This would suggest that there may be some relationship between the openness

of individuals who are members of an administrative performance team and innovation.

This researcher would recommend that openness and closedness of individuals within a central office school district and the possible relationship to innovation be considered for future research studies.

The researcher further recommends the use of an instrument such as the Rokeach Dogmatism Scale as a comparative measure between individuals on the APT of innovative and non-innovative districts as a point from which to start.

Too, it may be that only certain individuals within a central office staff are critical to a change-receptive climate. Attention may need to be given to the particular role dimension a staff member has. Perhaps, for example, it is not so important for the Business Manger to be receptive to change so long as the Superintendent or certain key curriculum workers are, or perhaps the influence on the receptivity of a change depends on the nature of the change itself.

5. Should individual openness of certain personnel be discovered as a key variable, this has great implication to the screening procedures of individuals entering programs of preparation for leadership positions in education. If open individuals cause an open climate and if an open climate is critical to planned change, then it would seem some measure of openness ought to become a part of the screening process of future administrators.

This may also imply an incisive look at professional preparation programs in education. Are these programs such that certain personality types are more readily attracted to them, or are the patterns of training and the kinds of experiences provided of a nature from which largely issue certain personality types?

6. The general lack of agreement within a particular district as to "what is" may carry with it a further implication. Since there is this diversity of perception which existed within central office staffs and which did not exist among the elementary and secondary school staffs in previous research involving the use of the OCDQ, there may be implied some rather basic differences between individuals who are teachers and individuals who achieve central office leadership positions. Why should the reliability coefficients of the individual school staffs be high and when the instrument is applied to central office APT, be low? What is different about the two groups of people?

On the basis of the limited evidence, it cannot be generalized that individuals who assume central office leadership positions are more individualistic than those who remain in the classroom, but the reliability data collected would suggest that this might be so.

Teachers within schools do appear to perceive things ("what is") more in accord with their colleagues than do

APT members. There is more congruence of perception among the teachers than among the APT members included in the current research.[124]

Halpin and Croft in their original study cite a study by Guba, Jackson, and Bidwell which may indicate why the reliability coefficients between the sample in the current study and those obtained in studies involving teachers might differ.[125]

> The findings [of the Guba, Jackson, and Bidwell study] showed that the needs most characteristic of this group of teachers were high deference, order, and endurance and low heterosexuality, dominance and exhibition . . .
>
> Somehow, through educational experiences the initial personality differences of teachers coalesce into a common personality pattern. Whether or not this process occurs by genuine change in non-conformist personalities or by attrition as non-conformists drop out, remains a moot question.

Perhaps then, individuals who become educational leaders become so partly as a result of their individuality and different perceptional background. The current researcher's low reliability figures would seem to indicate this.

7. It is possible to speculate too, that the nature of the innovation itself may make some difference in its

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[124] *Supra*, Chapter 4, pp. 104 and 106.

[125] Halpin and Croft, *op. cit.*, p. 113.

acceptance. Some types of school districts may readily adopt certain innovations and yet be reluctant to adopt others. Would researchers be likely to find districts highly innovative, for example, in their business and finance departments and less so in the area of curriculum if the Business Director was open and the Curriculum Director not? Could such wide diversity of personality exist side by side in an effective organization? Or, is the way the superintendent acts and reacts critical to certain kinds of innovation. Some explanation of the atypicalness of certain of the districts included in the samples may lie in an examination of the nature of the adopted innovations within the districts, as well as the nature of the persons charged with the responsibility for the various aspects of central office activity. Future researchers may wish to concentrate some attention on this.

8. Attention should be called to the fact that the districts included in the current research tend to be among the larger districts in the State. This is due to the selection criterion requiring at least five members to be on the central office administrative performance team. In smaller districts much the same kind of relationship may exist between superintendents and individual building principals or any other professional administrative and supervisory personnel. This researcher thus suggests that additional

research be conducted to include these subordinates in place of the usual central office APT. Some new understandings relative to innovation in the small school district setting may issue from such research studies.

9. It has been generally concluded that climate, or certain elements of climate, appear along with innovativeness in school districts. Some question may be raised about the best way to discern climate. The researcher has already suggested that climate could perhaps be inferred by studying the individual personality makeup of APT members, or at least of determined key APT members.

Rather than inferring organizational climate from the varied personalities of the administrative performance team it would seem that an even better way would be to further develop the OCDQ. The researcher would suggest that s strong contribution could be made by some future researcher by building upon the concepts and theory of the original OCDQ developed by Halpin and Croft and so develop a more perfect instrument for application to administrative staffs.

The current study has revealed the Organizational Climate Descriptive Questionnaire to be of value in describing the climate residing in the central office. Revealed, as it was, to have some value in its crudely adapted form, it would seem most important that it be further developed and refined into a sophisticated tool for description.

A Concluding Statement

This research has been an exploratory study into the organizational climate existing in the central office of innovative and non-innovative school districts in Ohio.

The merit of any research study lies as much in the new questions it raises as in the answers it gives. An exploratory study such as this one merely opens the door a little further so that more precise and sophisticated research may follow. It is hoped that this will occur and that the current study will serve as a lead from which many can follow as the answers to the problem of creating responsive and planned change in the school setting continue to be sought.

APPENDIXES

APPENDIX A

A-1 The Original Organizational Climate Descriptive Questionnaire

A-2 Items by Subtest in the Original OCDQ

A-3 The Central Office Organizational Climate Descriptive Questionnaire

A-4 Items by Subtest in the Central Office OCDQ

APPENDIX A-1

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

A. W. HALPIN and D. B. CROFT

The items in this questionnaire describe typical behaviors or conditions that occur within an elementary-school organization. Please indicate to what extent each of these descriptions characterizes your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the Instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they must work. After you have answered the questionnaire we will examine the behaviors or conditions that have been described as typical by the majority of the teachers in your school, and we will construct from this description, a portrait of the Organizational Climate of your school.

Note: This instrument includes buffer items which the authors used to fill out the IBM cards. These five items are not scored. The questionnaire scores are based on 64 items. The buffer items are numbers 45, 65, 67, 68, and 69.

Marking Instructions

Printed below is an example of a typical item found in the Organizational Climate Description Questionnaire:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Teachers call each other by their first names. 1 2 [✓ 3] 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly, as in the example. **PLEASE BE SURE THAT YOU MARK EVERY ITEM.**

BIOGRAPHICAL INFORMATION

5-7 School: ______________________________
(Write in the name of your school)

Please place a check mark to the right of the appropriate category.

8. Position:	Principal	1.	________
	Teacher	2.	________
	Other	3.	________
9. Sex:	Man	1.	________
	Woman	2.	________
10. Age:	20-29	1.	________
	30-39	2.	________
	40-49	3.	________
	50-59	4.	________
	60 or over	5.	________
11. Years of experience in education:	0-9	1.	________
	10-19	2.	________
	20-29	3.	________
	30 or over	4.	________
12. Years at this school:	0-4	1.	________
	5-9	2.	________
	10-19	3.	________
	20 or over	4.	________

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

13. Teacher's closest friends are other faculty members at this school. 1 2 3 4

14. The mannerisms of teachers at this school are annoying. 1 2 3 4

15. Teachers spend time after school with students who have individual problems. 1 2 3 4

16. Instructions for the operation of teaching aids are available. 1 2 3 4

17. Teachers invite other faculty to visit them at home. 1 2 3 4

18. There is a minority group of teachers who always oppose the majority. 1 2 3 4

19. Extra books are available for classroom use. 1 2 3 4

20. Sufficient time is given to prepare administrative reports. 1 2 3 4

21. Teachers know the family background of other faculty members. 1 2 3 4

22. Teachers exert group pressure on non-conforming faculty members. 1 2 3 4

23. In faculty meetings, there is a feeling of "let's get things done." 1 2 3 4

24. Administrative paper work is burdensome at this school. 1 2 3 4

25. Teachers talk about their personal life to other faculty members. 1 2 3 4

26. Teachers seek special favors from the principal. 1 2 3 4

27. School supplies are readily available for use in classwork. 1 2 3 4

28. Student progress reports require too much work. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

29. Teachers have fun socializing together during school time. 1 2 3 4

30. Teachers interrupt other faculty members who are talking in staff meetings. 1 2 3 4

31. Most of the teachers here accept the faults of their colleagues. 1 2 3 4

32. Teachers have too many committee requirements. 1 2 3 4

33. There is considerable laughter when teachers gather informally. 1 2 3 4

34. Teachers ask nonsensical questions in faculty meetings. 1 2 3 4

35. Custodial service is available when needed. 1 2 3 4

36. Routine duties interfere with the job of teaching. 1 2 3 4

37. Teachers prepare administrative reports by themselves. 1 2 3 4

38. Teachers ramble when they talk in faculty meetings. 1 2 3 4

39. Teachers at this school show much school spirit. 1 2 3 4

40. The principal goes out of his way to help teachers. 1 2 3 4

41. The principal helps teachers solve personal problems. 1 2 3 4

42. Teachers at this school stay by themselves. 1 2 3 4

43. The teachers accomplish their work with great vim, vigor, and pleasure. 1 2 3 4

44. The principal sets an example by working hard himself. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

45. The principal does personal favors for teachers. 1 2 3 4

46. Teachers eat lunch by themselves in their own classrooms. 1 2 3 4

47. The morale of the teachers is high. 1 2 3 4

48. The principal uses constructive criticism. 1 2 3 4

49. The principal stays after school to help teachers finish their work. 1 2 3 4

50. Teachers socialize together in small select groups. 1 2 3 4

51. The principal makes all class-scheduling decisions. 1 2 3 4

52. Teachers are contacted by the principal each day. 1 2 3 4

53. The principal is well prepared when he speaks at school functions. 1 2 3 4

54. The principal helps staff members settle minor differences. 1 2 3 4

55. The principal schedules the work for the teachers. 1 2 3 4

56. Teachers leave the grounds during the school day. 1 2 3 4

57. The principal criticizes a specific act rather than a staff member. 1 2 3 4

58. Teachers help select which courses will be taught. 1 2 3 4

59. The principal corrects teachers' mistakes. 1 2 3 4

60. The principal talks a great deal. 1 2 3 4

61. The principal explains his reasons for criticism to teachers. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

62. The principal tries to get better salaries for teachers. 1 2 3 4

63. Extra duty for teachers is posted conspicuously. 1 2 3 4

64. The rules set by the principal are never questioned. 1 2 3 4

65. The principal looks out for the personal welfare of teachers. 1 2 3 4

66. School secretarial service is available for teachers' use. 1 2 3 4

67. The principal runs the faculty meeting like a business conference. 1 2 3 4

68. The principal is in the building before teachers arrive. 1 2 3 4

69. Teachers work together preparing administative reports. 1 2 3 4

70. Faculty meetings are organized according to a tight agenda. 1 2 3 4

71. Faculty meetings are mainly principal-report meetings. 1 2 3 4

72. The principal tells teachers of new ideas he has run across. 1 2 3 4

73. Teachers talk about leaving the school system. 1 2 3 4

74. The principal checks the subject-matter ability of teachers. 1 2 3 4

75. The principal is easy to understand. 1 2 3 4

76. Teachers are informed of the results of a supervisor's visit. 1 2 3 4

77. Grading practices are standardized at this school. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

78. The principal insures that teachers work to their full capacity. 1 2 3 4

79. Teachers leave the building as soon as possible at day's end. 1 2 3 4

80. The principal clarifies wrong ideas a teacher may have. 1 2 3 4

81. Schedule changes are posted conspicuously at this school. 1 2 3 4

APPENDIX A-2

OCDQ, FORM IV, ITEMS THAT COMPOSE THE 8 SUBTESTS:

Teacher's Behavior

I DISENGAGEMENT

14. The mannerisms of teachers at this school are annoying.
18. There is a minority group of teachers who always oppose the majority.
22. Teachers exert group pressure on non-conforming faculty members.
26. Teachers seek special favors from the principals.
30. Teachers interrupt other faculty members who are talking in staff meetings.
34. Teachers ask nonsensical questions in faculty meetings.
38. Teachers ramble when they talk in faculty meetings.
42. Teachers at this school stay by themselves.
50. Teachers socialize together in small select groups.
73. Teachers talk about leaving the school system.

II HINDRANCE

-16. Instructions for the operation of teaching aids are available.
-20. Sufficient time is given to prepare administrative reports.
24. Administrative paper work is burdensome at this school.
28. Student progress reports require too much work.
32. Teachers have too many committee requirements.
36. Routine duties interfere with the job of teaching.

III ESPRIT

15. Teachers spend time after school with students who have individual problems.
19. Extra books are available for classroom use.
23. In faculty meetings, there is a feeling of "let's get things done."
27. School supplies are readily available for use in classwork.
31. Most of the teachers here accept the faults of their colleagues.

33. There is considerable laughter when teachers gather informally.
35. Custodial service is available when needed.
39. Teachers at this school show much school spirit.
43. The teachers accomplish their work with great vim, vigor, and pleasure.
47. The morale of the teachers is high.

IV INTIMACY

13. Teachers' closest friends are other faculty members at this school.
17. Teachers invite other faculty to visit them at home.
21. Teachers know the family background of other faculty members.
25. Teachers talk about their personal life to other faculty members.
29. Teachers have fun socializing together during school time.
-37. Teachers prepare administrative reports by themselves.
69. Teachers work together preparing administrative reports.

Principal's Behavior

V ALOOFNESS

46. Teachers eat lunch by themselves in their own classrooms.
52. Teachers are contacted by the principal each day.
56. Teachers leave the grounds during the school day.
64. The rules set by the principal are never questioned.
-66. School secretarial service is available for teachers' use.
67. The principal runs the faculty meeting like a business conference.
70. Faculty meetings are organized according to a tight agenda.
71. Faculty meetings are mainly principal-report meetings.
-76. Teachers are informed of the results of a supervisor's visit.

VI PRODUCTION EMPHASIS

51. The principal makes all class-scheduling decisions.
55. The principal schedules the work for the teachers.
59. The principal corrects teachers' mistakes.
60. The principal talks a great deal.
63. Extra duty for teachers is posted conspicuously.
74. The principal checks the subject-matter ability of teachers.
78. The principal insures that teachers work to their full capacity.

VII THRUST

40. The principal goes out of his way to help teachers.
44. The principal sets an example by working hard himself.
48. The principal uses constructive criticism.
53. The principal is well prepared when he speaks at school functions.
61. The principal explains his reasons for criticism to teachers.
65. The principal looks out for the personal welfare of teachers.
68. The principal is in the building before teachers arrive.
72. The principal tells teachers of new ideas he has run across.
75. The principal is easy to understand.

VIII CONSIDERATION

41. The principal helps teachers solve personal problems.
45. The principal does personal favors for teachers.
49. The principal stays after school to help teachers finish their work.
54. The principal helps staff members settle minor differences.
58. Teachers help select which courses will be taught.
62. The principal tries to get better salaries for teachers.

APPENDIX A-3

CENTRAL OFFICE ORGANIZATIONAL CLIMATE QUESTIONNAIRE(1.)

The items in this questionnaire describe behaviors or conditions that occur within a central office administrative and supervisory staff organization. Please indicate to what extent each of these descriptions characterizes your central office organization. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which central office staff members behave and of the various conditions under which they must work. After you have answered the questionnaire, the behaviors or conditions that have been described as typical by the majority of staff members will be examined, and constructed from this description will be a portrait of the Organizational Climate of your central office.

Complete anonymity is desired so do not write your name on the questionnaires.

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1. This is an adaptation of the Organizational Climate Description Questionnaire as developed by A. W. Halpin and D. B. Croft and is used with the authors' permission.

Marking Instructions

Printed below is an example of a typical item found in this questionnaire:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Staff members call each other by their first names. 1 2 [✓ 3] 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" in his districts central office. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your central office.

Please mark your response clearly, as in the example. PLEASE BE SURE THAT YOU MARK EVERY ITEM.

Biographical Information

1--3. School District ______________________________
(Write in the name of your district)

Please place a check mark to the right of the appropriate category.

4. Area of major administrative or supervisory responsibility:

Chief Administrative Officer (i.e., Superintendent) 1.__________

Supervision: Curriculum and Instruction 2.__________

Administration: Curriculum and Instruction 3.__________

Pupil Personnel 4.__________

Professional Personnel 5.__________

Business Administration and Finance 6.__________

Building and Grounds 7.__________

Transportation 8.__________

Other (please specify) 9.__________

5. Administrative or Supervisory Responsibility is largely:

Elementary 1.__________

Secondary 2.__________

General 3.__________

6. Sex:

Male 1.__________

Female 2.__________

7. Age: 25 - 34 1.________
35 - 44 2.________
45 - 54 3.________
55 - 64 4.________
65 or over 5.________

8. Years of experience in education:
0 - 4 1.________
5 - 9 2.________
10 - 19 3.________
20 or over 4.________

10. Years in central office:
0 - 4 1.________
5 - 9 2.________
10 - 19 3.________
20 or over 4.________

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

11. Central office staff members' closest friends are other administrators and/or supervisors in the central office. 1 2 3 4

12. The mannerisms of the central office administrative and supervisory staff members are annoying. 1 2 3 4

13. Staff members invite other central office colleagues to visit them at their homes. 1 2 3 4

14. There is a minority group on this staff who always oppose the majority. 1 2 3 4

15. Sufficient time is given to prepare administrative reports. 1 2 3 4

16. Staff members know the family background of other staff members. 1 2 3 4

17. Group pressure is exerted on non-conforming staff members. 1 2 3 4

18. In staff meetings there is a feeling of "Let's get things done." 1 2 3 4

19. Administrative paperwork is burdensome in this office. 1 2 3 4

20. Staff members talk about their personal life with other staff members. 1 2 3 4

21. Staff members seek special favors from the superintendent. 1 2 3 4

22. Supplies are readily available for use. 1 2 3 4

23. Reports require too much work. 1 2 3 4

24. Staff members have fun socializing together during working hours. 1 2 3 4

25. Members interrup other central staff members who are talking in staff meetings. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

26. Most of the central staff here accept the faults of their colleagues. 1 2 3 4

27. Central office staff have too many committee assignments. 1 2 3 4

28. There is considerable laughter when the staff gathers informally. 1 2 3 4

29. Nonsensical questions are asked by various members in staff meetings. 1 2 3 4

30. Routine duties interfere with the job of administrative and/or supervisory leadership here. 1 2 3 4

31. Staff members prepare administrative reports by themselves. 1 2 3 4

32. Staff members ramble when they talk at staff meetings. 1 2 3 4

33. Staff shows much "school spirit." 1 2 3 4

34. The superintendent goes out of his way to help the staff. 1 2 3 4

35. The superintendent helps staff members solve personal problems. 1 2 3 4

36. Staff members in this office stay by themselves. 1 2 3 4

37. Staff accomplish their work with great vim, vigor, and pleasure. 1 2 3 4

38. The superintendent sets an example by working hard himself. 1 2 3 4

39. The superintendent does personal favors for staff members. 1 2 3 4

40. Staff members eat their lunches by themselves. 1 2 3 4

41. The morale of this staff is high. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

42. The superintendent uses constructive criticism. 1 2 3 4

43. The superintendent stays after hours to help staff finish work. 1 2 3 4

44. Staff members socialize together in small select groups. 1 2 3 4

45. Staff members are contacted by the superintendent each day. 1 2 3 4

46. The superintendent is well prepared when he speaks at a school function. 1 2 3 4

47. The superintendent helps staff members solve minor differences. 1 2 3 4

48. The superintendent schedules the work for the staff. 1 2 3 4

49. The superintendent corrects staff members' mistakes. 1 2 3 4

50. The superintendent talks a greal deal. 1 2 3 4

51. The superintendent explains his reasons for criticism to the staff. 1 2 3 4

52. The superintendent tries to get better salaries for the staff. 1 2 3 4

53. The rules set by the superintendent are never questioned. 1 2 3 4

54. The superintendent looks out for the personal welfare of the staff. 1 2 3 4

55. Adequate secretarial service is available for each staff member. 1 2 3 4

56. The superintendent runs staff meetings like a business conference. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

57. The superintendent is in the office before staff members. 1 2 3 4

58. Staff works together preparing administrative reports. 1 2 3 4

59. Staff meetings are organized according to a tight agenda. 1 2 3 4

60. Staff meetings are mainly superintendent-report meetings. 1 2 3 4

61. The superintendent tells staff of new ideas he has run across. 1 2 3 4

62. Staff members talk about leaving the system. 1 2 3 4

63. The superintendent checks on the special technical abilities of central office administrators and supervisors. 1 2 3 4

64. The superintendent is easy to understand. 1 2 3 4

65. The superintendent insures that staff works to full capacity. 1 2 3 4

APPENDIX A-4

CENTRAL OFFICE ORGANIZATIONAL CLIMATE DESCRIPTIVE QUESTIONNAIRE, ITEMS THAT COMPOSE THE 8 SUBTESTS:

Staff Behavior

I Disengagement

12. The mannerisms of the central office administrative and supervisory staff members are annoying.
14. There is a minority group on this staff who always oppose the majority.
17. Group pressure is exerted on non-conforming staff members.
21. Staff members seek special favors from the superintendent.
25. Members interrupt other central staff members who are talking in staff meetings.
29. Nonsensical questions are asked by various members in staff meetings.
32. Staff members ramble when they talk at staff meetings.
36. Staff members in this office stay by themselves.
44. Staff members socialize together in small select groups.
62. Staff members talk about leaving the system.

II Hindrance

-15. Sufficient time is given to prepare administrative reports.
19. Administrative paperwork is burdensome in this office.
23. Reports require too much work.
27. Central office staff have too many committee assignments.
30. Routine duties interfere with the job of administrative and/or supervisory leadership here.

III Esprit

18. In staff meetings there is a feeling of "Let's get things done."
22. Supplies are readily available for use.
26. Most of the central staff here accept the faults of their colleagues.

28. There is considerable laughter when the staff gathers informally.
33. Staff shows much "school spirit."
37. Staff accomplish their work with great vim, vigor, and pleasure.
41. The morale of this staff is high.

IV Intimacy

20. Staff members talk about their personal life with other staff members.
11. Central office staff members' closest friends are other administrators and/or supervisors in the central office.
13. Staff members invite other central office colleagues to visit them at their homes.
16. Staff members know the family background of other staff members.
24. Staff members have fun socializing together during working hours.
-31. Staff members prepare administrative reports by themselves.
58. Staff works together preparing administrative reports.

Superintendent's Behavior

V Aloofness

40. Staff members each their lunches by themselves.
45. Staff members are contacted by the superintendent each day.
53. The rules set by the superintendent are never questioned.
-55. Office secretarial service is available for each staff member.
56. The superintendent runs staff meetings like a business conference.
59. Staff meetings are organized according to a tight agenda.
60. Staff meetings are mainly superintendent-report meetings.

VI Production Emphasis

48. The superintendent schedules the work for the staff.
49. The superintendent corrects staff members' mistakes.
50. The superintendent talks a great deal.

65. The superintendent insures that staff works to full capacity.
63. The superintendent checks on the special technical abilities of central office administrators and supervisors.

VII Thrust

34. The superintendent goes out of his way to help the staff.
38. The superintendent sets an example by working hard himself.
42. The superintendent uses constructive criticism.
46. The superintendent is well prepared when he speaks at a school function.
51. The superintendent explains his reasons for criticism to the staff.
54. The superintendent looks out for the personal welfare of the staff.
57. The superintendent is in the office before staff members.
61. The superintendent tells staff of new ideas he has run across.
64. The superintendent is easy to understand.

VIII Consideration

35. The superintendent helps staff members solve personal problems.
39. The superintendent does personal favors for staff members.
43. The superintendent stays after hours to help staff finish work.
47. The superintendent helps staff members settle minor differences.
52. The superintendent tries to get better salaries for the staff.

APPENDIX B

LETTER TO SUPERINTENDENTS

Dear _______________:

As you are aware there is, at present, an Ohio Innovations Study to determine the extent and nature of innovative practice in the school districts of the State of Ohio. You have indicated your interest in the study by being one of the over 300 districts which responded to requests for information about innovative practices in your district.

I am conducting further research relative to innovation. This research is an outgrowth of the "Ohio Innovations Study" and is being conducted by the writer to extend the knowledge gained from this study as well as to satisfy dissertation requirements for the Ph.D. degree at The Ohio State University.

This research requires the administration of a descriptive questionnaire to the central office administrative performance team of selected school districts in the State. For the purposes of this research, supervisors, business officials, and other professional personnel in the central office as well as "administrators" are considered as administrative performance team members. The instrument requires approximately thirty minutes for completion and for valid results must be administered by the researcher to all members collectively, at one sitting. It could easily be taken care of at one of your regular staff meetings, in a minimum of time.

The only criterion is that the central office performance team, with membership as previously described, consist of at least five members. The latest State Directory lists _______ members of your administrative performance team (including you, of course). All, or most of these, ought to be present for the administration of the questionnaire. It is most essential that you, as chief administrative officer, be present.

May I have thirty minutes of your and your staff's time to conduct this phase of what promises to be a significant research study? I will telephone you within the next few days to receive your answer and to set up the most convenient time for me to come to your district.

Cordially yours,

Larry W. Hughes, Superintendent
Crestline Public Schools
Crestline, Ohio

APPENDIX C

C-1 Raw Mean Scores for Each of the Twenty-Four Districts on Each of the Eight Subtests of the OCDQ

C-2 Selected Characteristics of Highly Innovative School Districts

C-3 Selected Characteristics of Non-Innovative School Districts

APPENDIX C-1

MEAN SCORES (RAW MEAN) FOR EACH OF THE TWENTY-FOUR DISTRICTS ON EACH OF THE EIGHT SUBTESTS OF THE OCDQ

District	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
001	1.243	1.886	3.510	2.449	2.143	2.429	3.460	2.257
002	1.400	1.680	3.514	2.857	2.086	2.560	3.200	2.840
003	1.514	1.657	3.592	2.653	2.265	2.829	3.683	2.971
004	1.500	2.400	3.657	2.314	2.257	2.080	3.067	2.600
005	1.273	1.964	3.468	2.558	2.013	2.054	3.232	2.491
006	1.350	1.600	3.738	2.595	2.024	2.833	3.722	3.533
007	1.320	1.920	3.429	2.057	2.257	2.280	3.311	3.040
008	1.556	1.689	3.349	2.238	2.635	2.178	3.407	2.489
009	1.400	2.100	3.500	2.762	2.167	2.333	3.389	2.968
010	1.367	1.300	3.905	2.500	2.023	2.100	3.241	2.533
012	1.433	1.667	3.381	2.270	2.222	2.244	3.247	2.578
101	1.514	1.743	3.184	2.408	2.490	2.171	3.127	2.514
102	1.430	1.720	3.557	2.229	2.271	2.100	3.467	2.720
103	1.420	1.400	3.143	2.257	2.286	2.760	3.444	2.680
104	1.633	1.467	3.167	2.357	1.927	2.333	3.148	2.967
105	1.843	1.686	3.041	2.265	2.225	1.943	2.429	1.971
106	1.260	1.560	3.771	2.629	2.029	2.480	3.533	3.160
107	1.463	1.979	3.271	2.429	1.977	2.000	3.304	2.621
108	1.517	1.233	3.238	2.357	1.929	2.233	3.444	2.867
109	1.917	1.767	2.905	2.000	2.238	1.967	2.796	2.500
110	1.860	2.000	3.229	2.714	2.229	2.320	3.000	2.960
111	1.600	1.767	3.357	2.405	2.286	2.633	3.352	3.167
112	1.350	1.825	3.268	2.339	1.732	1.775	3.333	2.650
113	1.467	1.767	3.262	2.381	2.738	2.433	3.259	3.100

APPENDIX C-2

SELECTED CHARACTERISTICS OF HIGHLY INNOVATIVE SCHOOL DISTRICTS

District	A.D.M.	Assessed Val. per Pupil	School Tax Rate (Mills)	Total Cost per Pupil	Instructional Cost per Pupil	
					Cost	%
002	7,942	$ 21,403	28.8	$589.54	$409.93	69.5
009	3,444	23,847	27.8	587.29	408.74	69.6
005	88,320	144,377	23.56	339.25	238.24	70.2
010	5,263	34,763	23.64	552.19	279.50	68.7
006	2,905	13,003	30.7	440.10	309.03	70.2
001	12,224	13,530	35.06	463.31	310.43	67.0
003	5,570	107,888	28.20	415.12	297.40	71.6
004	5,913	5,584	29.50	433.46	391.04	67.1
012	20,979	16,287	23.4	414.92	301.65	72.7
008	12,298	19,092	22.4	446.69	301.12	67.4

Sources: *Basic Financial Data of Ohio School Districts*, OEA Research Report (Columbus: Ohio Education Association, 1964); *Costs per Pupil in Average Daily Membership in Ohio's City, Exempted Village, and County School Systems*, from July 1, 1963 to June 30, 1964 (Columbus: State Department of Education, 1964).

APPENDIX C-3

SELECTED CHARACTERISTICS OF NON-INNOVATIVE SCHOOL DISTRICTS

District	A.D.M.	Assessed Val. per Pupil	School Tax Rate (Mills)	Total Cost per Pupil	Instructional Cost per Pupil	
					Cost	%
102	10,953	$ 18,528	31.7	$425.47	$303.85	71.4
103	2,182	39,827	19.4	592.58	401.00	67.7
112	53,920	172,933	22.7	419.15	308.43	73.6
111	3,148	15,618	22.4	377.41	263.75	69.9
108	1,775	9,735	25.4	305.01	210.60	69.0
101	5,272	14,508	23.9	358.21	257.94	72.0
109	5,837	12,780	29.2	390.22	269.74	69.1
104	2,949	12,109	20.5	355.27	249.76	70.3
113	11,087	15,335	28.0	468.04	347.60	74.3
106	1,496	25,881	22.5	457.86	314.33	68.7
105	2,366	12,958	31.0	396.96	274.15	69.1
110	4,297	15,712	28.4	251.72	336.97	74.6
107	25,358	19,942	23.1	418.15	296.89	71.0

Sources: Basic Financial Data of Ohio School Districts, OEA Research Report (Columbus: Ohio Education Association, 1964); Costs per Pupil in Average Daily Membership in Ohio's City, Exempted Village, and County School Systems, from July 1, 1963 to June 30, 1964 (Columbus: State Department of Education, 1964).

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AUTOBIOGRAPHY

I, Larry Wayne Hughes, was born in Corning, Ohio, on March 12, 1931. All public schooling was received in the Toledo area and I was graduated in 1949 from Clay High School in Oregon, Ohio.

The Bachelor of Education and Master of Education degrees were received from the University of Toledo in 1956 and 1958. I began teaching in Hudson, Michigan in January, 1956 and two years later assumed the principalship of the Waldon, Michigan high school. I returned to Ohio in 1960 to become supervisor of secondary schools for the Hardin County schools for the succeeding two years.

In 1962, I received a National Defense Graduate fellowship for doctoral studies in educational administration at Miami University and The Ohio State University and a two-year residence was begun. I am presently serving as the superintendent of the Crestline, Ohio Public Schools.